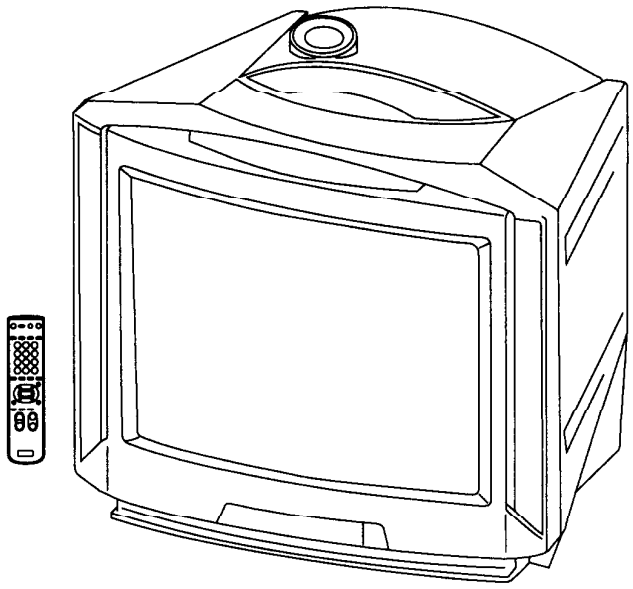
SERVICE MANUAL BG-1L CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-LX34M50	RM-871	EM	SCC-K58D-A
KV-LX34M61	RM-871	EM	SCC-K58C-A
KV-LX34M61	RM-871	GE	SCC-K52G-A
KV-LX34M80	RM-871	E	SCC-K60F-A
KV-LX34M80	RM-871	ME	SCC-K57K-A
KV-LX34M81	RM-871	ME	SCC-K57J-A
KV-LX34M90	RM-871	HK	SCC-K56E-A



MICROFILM

TRINITRON® COLOR TV

SONY®

SPECIFICATIONS

	KV-LX34M50, KV-LX34M61, KV-LX34M80, KV-LX34M81, KV-LX34M90	Note
Power requirements	110-240 V AC, 50/60 Hz	
Power consumption (W)	Indicated on the rear of TV	
Television system	B/G, I, D/K, M	
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58	
Stereo system	NICAM Stereo B/G, I, A2 Stereo (German) B/G	KV-LX34M61/LX34M90
Teletext language	English, German, Swedish, Italian, French, Spanish, Arabic	KV-LX34M61/LX34M81
Channel coverage		
B/G	VHF: E2 to E12 / UHF: E21 to E69 / CATV: S01 to S03, S1 to S41	
I	UHF: B21 to B68 / CATV: S01 to S03, S1 to S41	
D/K	VHF: C1 to C12, R1 to R12 / UHF: C13 to C57, R21 to R60 CATV: Z1 to Z39, S01 to S03, S1 to S41	
M	VHF: A2 to A13 / UHF: A14 to A79 / CATV: A-8 to A-2, A to W+4, W+6 to W+84	
Antenna	75-ohm external antenna terminal for VHF/UHF	
Audio output (speaker)	15W × 2	
Number of terminal		
Video	Input: 4 Output: 1	Phono jacks; 1 V_{P-P}, 75 ohms
Audio	Input: 4 Output: 1	Phono jacks; 500 mVrms
S1-Video	Input: 2	Y : 1 Vp-p, 75 ohms, unbalanced, sync negative C : 0.286 Vp-p, 75 ohms
Picture tube	34 inch	
Tube size (cm)	86	Measured diagonally
Screen size (cm)	80	Measured diagonally
Dimension (w/h/d, mm)	950 × 662 × 593	
Mass (kg)	48.5	
Accessories		
Supplied	Remote commander (1) Size R6 (AA) battery (2)	
Optional	TV stand SU-E29G	

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTSÅ PUBLISHED BY SONY.

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SECTION 1
GENERAL

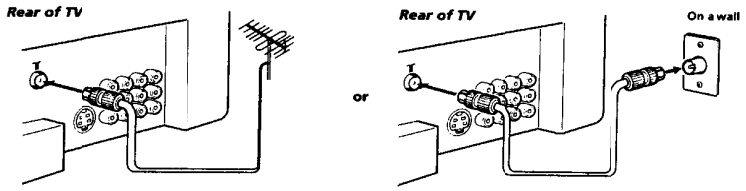
The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

Getting Started

Connections

Connecting a VHF antenna or a combination VHF/UHF antenna — 75-ohm coaxial cable (round)

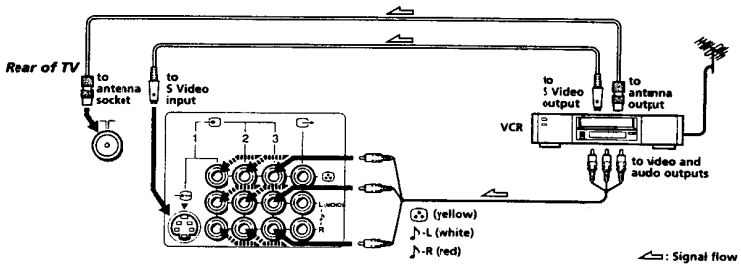
Attach an optional IEC antenna connector to the 75-ohm coaxial cable.
Plug the connector into the ╥ (antenna) socket at the rear of the TV.

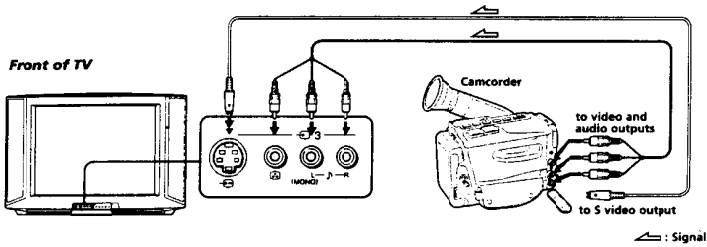


Connecting optional equipment

You can connect optional audio/video equipment to your TV such as a VCR, multi disc player, camcorder, video game or stereo system.

Connecting video equipment using video input jacks





When connecting a monaural VCR
Connect the yellow plug to (VIDEO) and the black plug to ♪-L (AUDIO-L MONO).

When connecting video game equipment
Connect video game equipment to the 3 (VIDEO 3 INPUT) jacks at the front of your TV or the (VIDEO IN) 3 jacks at the rear of your TV.

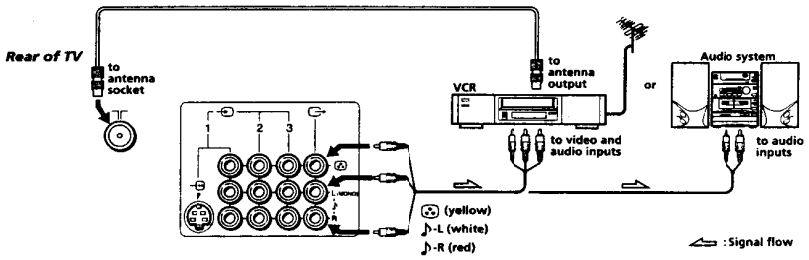
When connecting a VCR to the ╥ (antenna) terminal
Preset the signal output from the VCR to the program position 0.

When connecting video equipment to the 3 (VIDEO 3 INPUT) jacks or the (VIDEO IN) 3 jacks
Do not connect video equipment to the 3 (VIDEO 3 INPUT) jacks at the front and the (VIDEO IN) 3 jacks at the rear of your TV simultaneously; otherwise the picture will not be displayed properly on the screen.

If both S Video and video signals are input simultaneously
The S Video input signal is selected. To view a video input signal, disconnect the (S Video) connection.

Note on the video input
When no signal is input, the screen becomes blue.

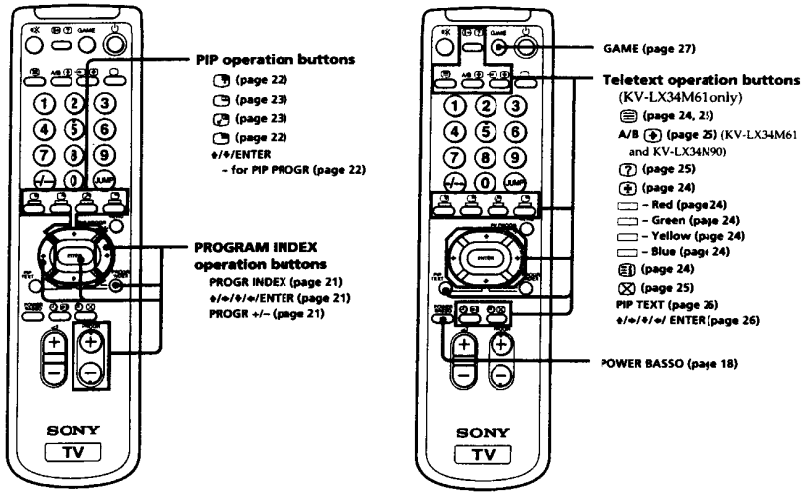
Connecting audio/video equipment using (MONITOR/TV OUT) jacks



Getting to know the remote commander

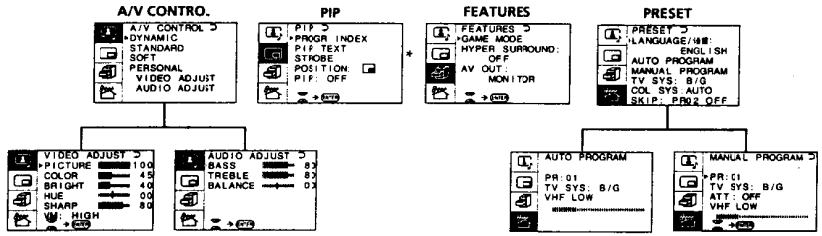
Names of buttons on the remote commander are indicated in different colors to represent the available functions.

Label color	Button function
White	For general TV operations
Green	For Teletext operations.
Yellow	For PIP and PROGRAM INDEX operations.



Introducing the menus

You can preset TV channels, adjust the picture and sound qualities, and select some settings using the on-screen menus. You can use the buttons on both the remote commander and the TV to operate the menus.



(*KV-LX34M61 only)

Getting back to the previous menu (except for AUTO PROGRAM)

Press • or • to move the cursor (▶) to the first line (⊃) of each menu, and press ENTER.

Cancelling the menu screen

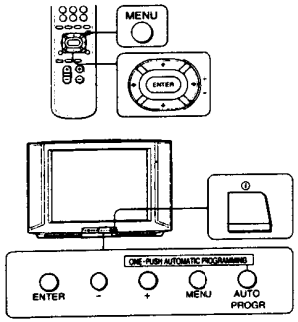
Press MENU.

Notes (except for AUTO PROGRAM)

- When a menu is selected after pressing ENTER, the color of both the menu and the menu symbol change and the cursor (▶) appears beside the first item of the menu.
- When an item on the menu is selected after pressing ENTER, the color of the item changes.
- You can refer to the guide (• ENTER) at the bottom of the menus (except for the A/V CONTROL and PRESET menus) for the basic operations of the menu.
- If more than approximately 60 seconds elapse after you press a button, the menu screen disappears automatically.

Changing the menu language

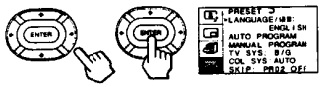
If you prefer Chinese to English, you can change the menu language. You can use buttons on both the remote commander and the TV.



1 Press ⏻ to turn on the TV.

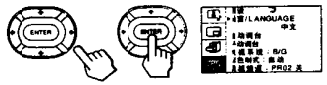
2 Press MENU.

3 Press ↑ or ↓ to move the cursor (▶) to the PRESET menu (), and press ENTER.



4 Make sure the cursor (▶) appears beside LANGUAGE/语言, and press ENTER.

5 Press ↑/→/↓/← to select 中文, and press ENTER.



All of the menus change to Chinese.

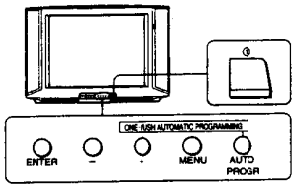
6 Press MENU to return to the normal screen.

Presetting channels

You can preset TV channels easily by storing all the receivable channels automatcally. You can also preset channels manually or disable program positions (see page 12).

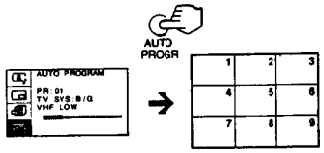
Presetting channels automatically

You can preset up to 100 TV channels in numerical sequence from the program position 1. You can preset channels automatically using the button on the TV or the menu.



1 Press ⏻ to turn on the TV.

2 Press AUTO PROGR.



The TV starts scanning and presetting channels automatically. When all of the receivable channels are stored, the AUTO PROGRAM menu disappears and the first nine preset TV programs appear on the nine sub screens. The nine sub screens disappear after being displayed for several seconds.

Note

- If you want to return to the normal screen while the nine sub screens are being displayed, you can press PROGR INDEX on the remote commander.

To preset channels automatically using the menu

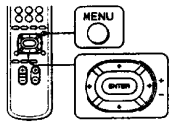
1 Press MENU.

2 Press ↑ or ↓ to move the cursor (▶) to the PRESET menu (), and press ENTER.

3 Press ↑ or ↓ to move the cursor (▶) to AUTO PROGRAM, and press ENTER.

Presetting channels manually

To change the program position for a channel or to receive a channel with a weak signal which you cannot receive by automatic presetting, preset the channel manually.



1 Press MENU.

2 Press ↑ or ↓ to move the cursor (▶) to the PRESET menu (), and press ENTER.

3 Select your local TV system.

(1) Press ↑ or ↓ to move the cursor (▶) to TV SYS, and press ENTER.

(2) Press ↑/→/↓/← until your local TV system appears on the menu, and press ENTER.

4 Press ↑ or ↓ to move the cursor (▶) to MANUAL PROGRAM, and press ENTER.

5 Select the program position to which you want to preset a channel.

(1) Make sure the cursor (▶) appears beside PR, and press ENTER.
(2) Press ↑/→/↓/← until the program position you want appears on the menu, and press ENTER.

6 Select the desired channel.

(1) Press ↑ or ↓ to move the cursor (▶) to VHF LOW, and press ENTER.
(2) Press ↑/→/↓/← until the desired channel picture appears on the TV screen, and press ENTER.

7 Press MENU to return to the normal screen.

If the TV signal is too strong

The picture may be distorted. You can reduce the picture distortion as described below.

1 Display the PRESET menu.
2 Press ↑ or ↓ to move the cursor (▶) to MANUAL PROGRAM, and press ENTER.
3 Press ↑ or ↓ to move the cursor (▶) to ATT, and press ENTER.
4 Press ↑/→/↓/← to select ON, and press ENTER.

If the TV system is not properly selected

The picture color may be poor and/or the sound may be noisy. In this case, select the appropriate TV system.

1 Press PROGR +/– or the number buttons to select the program position.
2 Display the PRESET menu.
3 Press ↑ or ↓ to move the cursor (▶) to TV SYS, and press ENTER.
4 Press ↑/→/↓/← until the appropriate TV system appears, and press ENTER.

Notes

- The TV system and the ATT (attenuator) settings are memorized for each program position.
- If you do not know your local TV system, consult your nearest Sony dealer or authorized service center.

Disabling program positions

By disabling unused or unwanted program positions, you can skip those positions when you press PROGR +/–.

1 Press MENU.

2 Press ↑ or ↓ to move the cursor (▶) to the PRESET menu (📺), and press ENTER.

3 Press ↑ or ↓ to move the cursor (▶) to SKIP, and press ENTER.

4 Press ↑ or ↓ until the unused or unwanted program position appears on the menu, and press ENTER.

5 Press ↑/→/↓/← to select ON, and press ENTER.

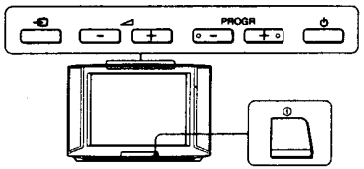
6 To disable other program positions, repeat steps 4 and 5.

7 Press MENU to return to the normal screen.

To cancel the skip setting

1 Display the PRESET menu.
2 Press ↑ or ↓ to move the cursor (▶) to SKIP, and press ENTER.
3 Press ↑ or ↓ until the program position you want to cancel the skip setting appears, and press ENTER.
4 Press ↑/→/↓/← to select OFF, and press ENTER.

Watching the TV



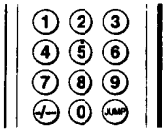
1 Press ⏻ to turn on the TV.

When the TV is turned on in the standby mode, the ⏻ indicator on the TV lights up. To turn on the TV completely, press ⏻ on the remote commander or the TV. When the TV is turned on completely, the PROGR +/–, 🔊 +/–, and ⏎ indicators on the TV light up.

2 Select the TV program you want to watch.

To select a program position directly

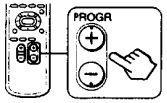
Press the number button.



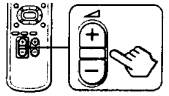
To select a two-digit program position, press "-/--" before the number buttons.
For example: to select program position 25, press "-/--," then "2" and "5."

To scan through program positions

Press PROGR +/– on the remote commander or the TV until the program position you want appears.



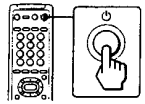
3 Press 🔊 +/– on the remote commander or the TV to adjust the volume.



Turning off the TV

To turn off the TV temporarily

Press ⏻ on the remote commander or the TV. The ⏻ indicator lights up.

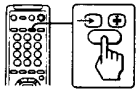


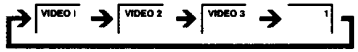
To turn off the TV completely

Press ⏻ on the TV.

Watching the video input

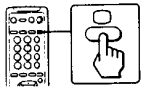
Press ⏎ on the remote commander or ⏎ on the TV.





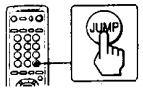
To watch TV

Press ▢ on the remote commander or ⏻ on the TV.



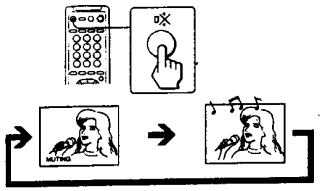
Switching back quickly to the previous channel

Press JUMP.



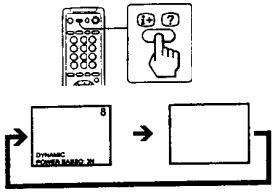
Muting the sound

Press 🔇.



Displaying the on-screen information

Press ⓘ ?.



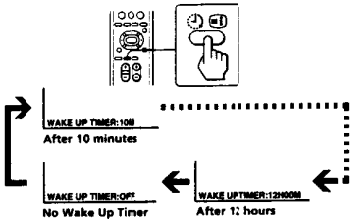
Note

- The on-screen display shows the program position or the video mode, the picture and sound information. The on-screen display for the picture and sound information disappears after being displayed for approximately three seconds.

Setting the Wake Up Timer

You can set the TV to turn on automatically after the period of time you want.

1 Press ⏲ repeatedly to set the timer.
The on-screen display appears.



2 If you want a particular TV program or video mode to be displayed using the Wake Up Timer, select the TV program or video mode.

3 Press ⏻ on the remote commander or the TV, or set the Sleep Timer to turn off the TV in the standby mode.
The ⏲ indicator lights up in amber color.

To cancel the Wake Up Timer, press ⏲ repeatedly until "WAKE UP TIMER: OFF" appears, or turn off the main power of the TV.

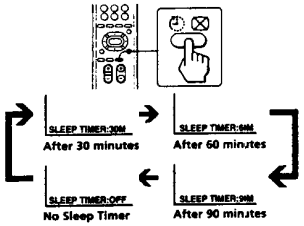
Notes

- The Wake Up Timer starts immediately after the on-screen display disappears.
- The last TV program position or video mode just before the TV turns into the standby mode will appear when the TV is turned on using the Wake Up Timer.
- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up Timer, the TV automatically turns into the standby mode. If you want to continue watching the TV, press any button or control on the TV or remote commander.

Setting the Sleep Timer

You can set the TV to turn off automatically after the period of time you want.

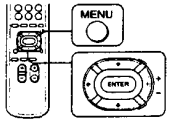
Press ⏲ ⊗.



To cancel the Sleep Timer, press ⏲ ⊗ repeatedly until "SLEEP TIMER: OFF" appears, or turn the TV off.

Adjusting the picture and sound

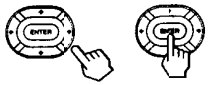
Selecting the picture and sound modes



1 Press MENU.

2 Make sure the cursor (▶) appears in the A/V CONTROL menu (📷), and press ENTER.

3 Press ↑ or ↓ to move the cursor (▶) to DYNAMIC, STANDARD, SOFT, or PERSONAL, and press ENTER.



Select	To
DYNAMIC	Receive high contrast picture with powerful sound.
STANDARD	Receive normal contrast picture with medium listening sound.
SOFT	Receive mild picture with soft sound.
PERSONAL	Receive the last picture and sound setings that are adjusted using VIDEO ADJUST and AUDIO ADJUST.

4 Press MENU to return to the normal screen.

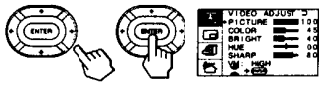
Adjusting the picture settings (VIDEO ADJUST)

You can adjust the picture settings to suit your taste with the VIDEO ADJUST option. The adjusted settings are stored in the PERSONAL option

1 Press MENU.

2 Make sure the cursor (▶) appears in the A/V CONTROL menu (📷), and press ENTER.

3 Press ↑ or ↓ to move the cursor (▶) to VIDEO ADJUST, and press ENTER.



4 Press ↑ or ↓ to move the cursor (▶) to the item you want to adjust, and press ENTER.

5 Press ↑/→/↓/← to adjust the selected item, and press ENTER.

For details on each item, see "Description of adjustable items" below.

6 To adjust other items, repeat steps 4 and 5.

7 Press MENU to return to the normal screen.

Description of adjustable items

Item	Press ↑/←	Press ↓/→
PICTURE	Decrease picture contrast.	Increase picture contrast.
COLOR	Decrease color intensity.	Increase color intensity.
BRIGHT	Darken the picture.	Brighten the picture
HUE	Make picture tones become reddish.	Make picture tones become greenish.
SHARP	Soften the picture.	Sharpen the picture.
VM	Decrease emphasis on picture edges.	Increase emphasis on picure edges.

Note
- You can adjust HUE for the NTSC system only.

If the picture is slightly snowy
You may try to improve the picture by changing the VM setting as described below:

1 Display the VIDEO ADJUST menu.
2 Press ↑ or ↓ to move the cursor (▶) to VM, and press ENTER.
3 Press ↑/→/↓/← to select LOW, and press ENTER.

If the picture color is abnormal when receiving programs through the 📡 (antenna) terminal
Change the color system or the TV system from the PRESET menu as described below until the color becomes normal.

1 Display the PRESET menu.
2 Press ↑ or ↓ to move the cursor (▶) to COL SYS or TV SYS, and press ENTER.
3 Press ↑/→/↓/← to change the color system or the TV system until the color becomes normal, and press ENTER.

Note
- Normally set the color system (COL SYS) to AUTO.

Adjusting the sound settings (AUDIO ADJUST)

You can adjust the sound settings to suit your taste with the AUDIO ADJUST option. The adjusted settings are stored in the PERSONAL option.

1 Press MENU.

2 Make sure the cursor (▶) appears in the A/V CONTROL menu (📷), and press ENTER.

3 Press ↑ or ↓ to move the cursor (▶) to AUDIO ADJUST, and press ENTER.

4 Press ↑ or ↓ to move the cursor (▶) to the item you want to adjust, and press ENTER.

5 Press ↑/→/↓/← to adjust the selected item, and press ENTER.

For details on each item, see "Description of adjustable items" below.

6 To adjust other items, repeat steps 4 and 5.

7 Press MENU to return to the normal screen.

Description of adjustable items

Item	Press ↑/←	Press ↓/→
BASS	Decrease the bass sound.	Increase the bass sound.
TREBLE	Decrease the treble sound.	Increase the treble sound.
BALANCE	Increase the left speaker's volume	Increase the right speaker's volume.

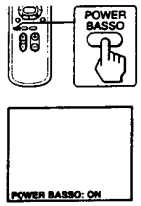
If the sound is distorted or noisy when receiving programs through the 📡 (antenna) terminal
Change the TV system from the PRESET menu as described below until the sound becomes normal.

1 Display the PRESET menu.
2 Press ↑ or ↓ to move the cursor (▶) to TV SYS, and press ENTER.
3 Press ↑/→/↓/← to change the TV system until the sound becomes normal, and press ENTER.

Listening to the POWER BASSO sound

The POWER BASSO sound enables you to enjoy a high quality sound mode with the best combination of all types of sound. It reproduces dynamic and clear sounds and emphasizes low and high audio effects as well.

Press POWER BASSO.



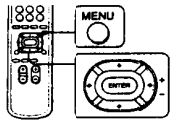
The sound mode of the TV program or the video input changes to the POWER BASSO sound.

To restore the previous sound mode
Press POWER BASSO again.

Note
- You can select any of the surround sound modes (HYPER SURROUND) to cancel the POWER BASSO sound.

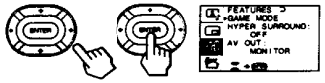
Listening to the surround sound (HYPER SURROUND)

The HYPER SURROUND feature enables you to enjoy a surround sound effect that is like being in a concert hall or movie theater when receiving stereo signals.



1 Press MENU.

2 Press ↓ or ↑ to move the cursor (▶) to the FEATURES MENU (), and press ENTER.



3 Press ↓ or ↑ to move the cursor (▶) to HYPER SURROUND, and press ENTER.

4 Press ↓/→/↑/← to select MOVIE, MUSIC, NEWS(BBE), HALL(SRS) or SPACE, and press ENTER.

MOVIE → MUSIC → NEWS(BBE)
↓
OFF ← SPACE ← HALL(SRS)

For details on each item, see "Description of adjustable items" below.

5 Press MENU to return to the normal screen.

Description of adjustable items

Select	To
MOVIE	Listen to a sound that emphasizes the bass audio effect of movie theater.
MUSIC	Listen to a dynamic and clear sound that emphasizes the low and high audio effect.
NEWS(BBE)	Listen to a sound that emphasizes voice.
HALL(SRS)	Listen to a sound that spreads out over a large area, giving the feeling of being at a concert hall.
SPACE	Listen to a monaural sound that gives a stereo-like effect.
OFF	Turn off the surround sound.

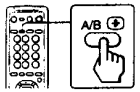
Notes
- The BBE is manufactured by Sony Corporation under license from BBE Sound, Inc. It is covered by U.S. Patent No. 4,638,258 and No. 4,482,866. The word "BBE" and the BBE symbol are the trademarks of BBE Sound, Inc.
- The (●)ⓇSRS (SOUND RETRIEVAL SYSTEM) is manufactured by Sony Corporation under license from SRS Labs, Inc. It is covered by U.S. Patent No. 4,748,669. The word "SRS" and the SRS symbol (●) are registered trademarks of SRS Labs, Inc.

Selecting a stereo or bilingual program

■ ***KV-LX34M61/LX34M90 only***

You can enjoy stereo sound or bilingual programs of NICAM and A2 (German) stereo systems.

Press A/B ⊕ repeatedly until you receive the sound you want.
The on-screen display changes corresponding to the selected sound and the ⏻/CD/🕘 indicator also lights up.



When receiving a NICAM program

Broadcasting	On-screen display (Selected sound)
NICAM stereo	NICAM (Stereo sound) → MONO (Regular sound)
NICAM bilingual	NICAM MAIN (Main sound) → NICAM SUB (Sub sound) → MONO (Regular sound)
NICAM monaural	NICAM MAIN (Main sound) → MONO (Regular sound)

When receiving an A2 (German) program

Broadcasting	On-screen display (Selected sound)
A2 (German) stereo	MONO (Regular sound) → STEREO (Stereo sound)
A2 (German) bilingual	MAIN (Main sound) → SUB (Sub sound)

Receiving area for NICAM and A2 (German) programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
A2 (German)	Australia, Malaysia, Thailand, etc.

Notes
- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select "MONO." The sound becomes monaural, however, the noise will be reduced.

If the sound is distorted or noisy when receiving a monaural program through the ⊤ (antenna) terminal
Press A/B ⊕ repeatedly until "MONO" appears on the screen while the ⏻/CD/🕘 indicator is off.

To cancel the monaural sound setting, press A/B ⊕ again until "AUTO" appears on thescreen.

MONO → AUTO

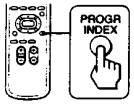
Notes
- The "MONO" or "AUTO" setting is memorized for each program position.
- You cannot receive stereo broadcast signal when the TV is in the "MONO" setting.

Viewing multiple programs at the same time (PROGRAM INDEX)

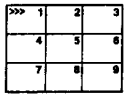
The PROGRAM INDEX feature allows you to view all the preset TV programs and the video inputs on the nine sub screens within the main screen at the same time.

You can view multiple programs on the nine sub screens using the button on the remote commander or the menu.

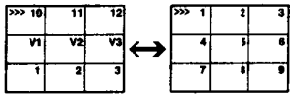
Press PROGR INDEX.



The first nine preset programs appear on the nine sub screens.



To view the next or the previous nine preset programs on the nine sub screens
Press PROGR +/– on the remote commander or the TV.



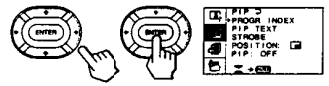
To select the program you want to watch directly after viewing multiple programs on the nine sub screens
Press the number buttons, -⊡⊕, or press ↑/→/↓/← to move the cursor (>>>) that appears on the first screen to the screen of the program you want to watch, and press ENTER.

To restore the normal screen
Press PROGR INDEX again or 🕘.
You can also select PROGR INDEX or PIP : OFF from the PIP menu, and press ENTER to restore the normal screen.

To view multiple programs on the nine sub screens using the menu

1 Press MENU.

2 Press ↑ or ↓ to move the cursor (▶) to the PIP menu (⊡), and press ENTER.

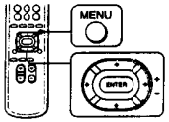


3 Make sure the cursor (▶) appears beside PROGR INDEX, and press ENTER.

Notes
- You can change the position of the nine sub screens using the PIP menu (as described in "Changing the position of the PIP screen" on page 23).
- You can hear the sound of the main screen when viewing multiple programs on the nine sub screens.
- You can use the number buttons on the remote commander to change the program position of the main screen when viewing multiple programs on the nine sub screens.

Displaying frame-by-frame pictures (STROBE)

You can watch a slow motion movement of the main screen picture which is displayed frame-by-frame on the nine sub screens within the main screen.



1 Press MENU.

2 Press ↑ or ↓ to move the cursor (▶) to the PIP menu (⧉), and press ENTER.

3 Press ↑ or ↓ to move the cursor (▶) to STROBE, and press ENTER.

To restore the normal screen

Select STROBE again or PIP : OFF from the PIP meru, and press ENTER.

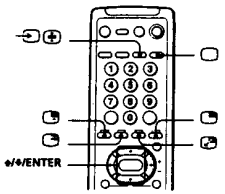
You can also press ▢, ⏻, PROGR +/–, or ⧉ to restore the normal screen.

Notes

- You can change the position of the nine sub screens using the PIP menu (as described in "Changing the position of the PIP screen" on page 23).
- You can hear the normal sound when using the STROBE feature.

Using the Picture-in-Picture (PIP) features

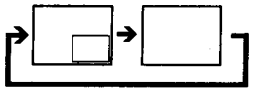
With the Picture-in-Picture (PIP) feature, you can display a sub screen within the main picture of different TV programs or video inputs.



Displaying the PIP screen

You can display the PIP screen using the button on the remote commander or the menu.

Press ⧉.



Selecting a TV program or video input in the PIP screen

To select a TV program, press ↑ or ↓, and press ENTER.

To select a video input, press ⧉ on the remote commander or ⏻ on the TV.

To display the PIP screen using the menu

1 Press MENU.

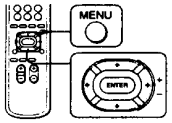
2 Press ↑ or ↓ to move the cursor (▶) to the PIP menu (⧉), and press ENTER.

3 Press ↑ or ↓ to move the cursor (▶) to PIP, and press ENTER.

4 Press ↑/→/↓/← to select ON, and press ENTER.

5 Press MENU to return to the normal screen.

Changing the position of the PIP screen

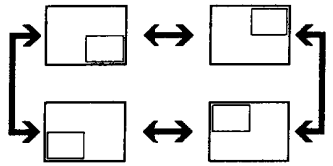


1 Press MENU.

2 Press ↑ or ↓ to move the cursor (▶) to the PIP menu (⧉), and press ENTER.

3 Press ↑ or ↓ to move the cursor (▶) to POSITION, and press ENTER.

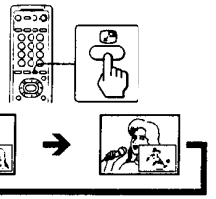
4 Press ↑/→/↓/← to select the position you want, and press ENTER.



5 Press MENU to return to the normal screen.

Swapping pictures between the main and PIP screens

Press ⧉.



Freezing the PIP screen

Press ⧉.

The PIP screen will freeze.

To restore the normal screen

Press ⧉ again.

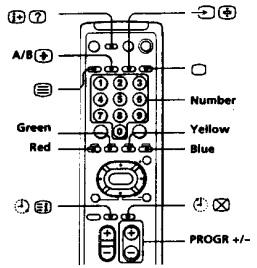
Notes

- When you display a video input on the PIP screen at an abnormal speed, the picture may be noisy depending on the VCR.
- If you display different color systems on the main screen and the PIP screen, the size of the PIP screen may be different and the PIP picture may be noisy. This does not indicate a malfunction of the TV.

Viewing Teletext

■ ***KV-LX34M61 only***

TV stations broadcast an information service called Teletext via a TV channel.
Teletext service allows you to receive various information such as weather forecasts or news at any time.



Displaying Teletext

1 Select a TV channel that carries the Teletext broadcast you want to watch.

2 Press ▤ to display the Teletext.
A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, "100" is displayed at the top left corner of the screen.

To turn off Teletext
Press ▢.

Superimposing a Teletext page on the TV picture

Press ▤.
Each time you press ▤, the screen changes as follows:

→ Teletext → Teletext and TV → TV →

Checking the contents of a Teletext service (INDEX)

Press ◴ ▤ to display an overview of the Teletext contents and page numbers.

Using FASTEXT

This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT program is broadcasted, the colored menus appear at the bottom of the screen. The colors of the menus correspond to the red (◔), green (◔), yellow (◔), and blue (◔) color-coded buttons on the remote commander.

To access a FASTEXT menu
Press the color-coded button on the remote commander that corresponds to the colored menu which appears at the bottom of the screen. The menu page appears on the screen after several seconds.

Selecting a Teletext page

Press the number buttons to enter the three-digit page number of the Teletext page you want.
If you make a mistake, re-enter the correct page number.

To access the next or previous page
Press PROGR +/–.

You can also access a Teletext page of any page numbers that appear in the colored column at the bottom of the screen using the corresponding color-coded button on the remote commander.

Holding a Teletext page (HOLD)

A Teletext page may consist of several subpages. You can stop the page scrolling in order to read the text at your own pace.

Press ⮌⊕.
The HOLD symbol "⊕" appears at the top left corner of the screen.

To resume normal Teletext operation
Press ⮌⊕ again or ▤.

Revealing concealed information (REVEAL)

The REVEAL option lets you disclose concealed information, such as an answer to a quiz that you find on some of the Teletext pages.

Press ⓘ?.

To conceal the information
Press ⓘ? again.

Enlarging the Teletext display (ENLARGE)

Press A/B⊕.
Each time you press A/B⊕, the Teletext display changes as follows:

→ Enlarge upper half → Enlarge lower half →
← Normal size ←

Waiting for a Teletext page while watching a TV program (TEXT CLEAR)

1 Key in the page number of the Teletext that you want to refer, then press ◴ ⊗.

2 When the page number is displayed on the screen, press ▤ to turn on the Teletext.

Displaying Teletext on the PIP screen (PIP TEXT)

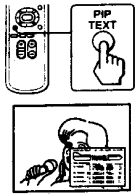
■ ***KV-LX34M61 only***

The PIP TEXT feature enables you to display a Teletext page on the PIP screen while watching a TV program.

You can display the Teletext on the PIP screen using the button on the remote commander or the menu.

1 Select a TV channel that carries the Teletext broadcast you want to watch.

2 Press PIP TEXT.

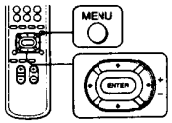


To restore the normal screen

Press PIP TEXT again, or press ▢, -⊖⊕, or PROGR +/–.

You can also select PIP : OFF from the PIP menu, and press ENTER to restore the normal screen.

To display a Teletext page on the PIP screen using the menu



1 Press MENU.

2 Press ↑ or ↓ to move the cursor (▶) to the PIP menu (▣), and press ENTER.

3 Press ↑ or ↓ to move the cursor (▶) to PIP TEXT, and press ENTER.

4 Press ↑/→/↓/← to select the Teletext page you want to watch.

Notes

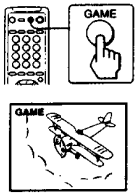
- You can also use the color-coded buttons (see page 24) while displaying a Teletext page on the PIP screen.
- To select a Teletext page on the PIP screen, press ↑/→/↓/← once only.
  If you press ↑/→/↓/← continuously, the Teletext page numbers also change continuously at a fast speed.
- You can change the position of a Teletext page on the PIP screen using the PIP menu (as described in "Changing the position of the PIP screen" on page 23).

Viewing a video game screen (GAME MODE)

The GAME MODE feature enables you to view a video game screen in the optimum mode that gives soft picture and dynamic sound effect.

You can display a video game screen using the button on the remote commander or the menu.

Press GAME.



The picture and sound change to the mode that is suitable for a video game.

To view a video game screen using the menu

1 Press MENU.

2 Press ↑ or ↓ to move the cursor (▶) to the FEATURES menu (🎛), and press ENTER.

3 Make sure the cursor (▶) appears beside GAME MODE, and press ENTER.

To restore the normal picture and sound modes

Press ▢, -⊖⊕, or PROGR +/–.

Notes

- If you press the GAME button when the TV is in the standby mode, the TV turns on automatically and the picture and sound change to the mode that is suitable for a video game.
- To display a video game screen, connect the video game equipment to the -⊖ 3 (VIDEO 3 INPUT) jacks at the front of the TV or the -⊖ (VIDEO IN) 3 jacks at the rear of the TV.

Customizing the TV

Using the AV OUT (advanced rec-out) terminal

You can select the output signal from the ⊃ (MONITOR/TV OUT) jacks at the rear of the TV. However, the signals of the PROGRAM INDEX, STROBE, PIP modes, and the Teletext broadcast cannot be output even though MONITOR is selected.

1 Press MENU.

2 Press ↑ or ↓ to move the cursor (▶) to the FEATURES menu (), and press ENTER.

3 Press ↑ or ↓ to move the cursor (▶) to AV OUT, and press ENTER.

4 Press ↑/←/↓/→ to select the output signal, and press ENTER.

Select	To
TV	Output the signal of the TV broadcast.
MONITOR	Output the signal of the picture you are watching as a main picture.

Note

- Do not change the channel while recording with a VCR through the ⊃ (MONITOR/TV OUT) jacks. If you change the channel, it also changes the channel you are recording.

Troubleshooting

If you have any problems, read this manual again and check the countermeasure for each of the symptoms listed below.
If the problem persists, contact your nearest Sony dealer or authorized service center.

Snowy picture
Noisy sound

➡Check the antenna.
➡Check the antenna connection on the TV and on the wall.
➡Check the TV system (TV SYS) setting.
➡Check the ATT (attenuator) setting.

Dotted lines or stripes

➡This may be caused by local interference (e.g. cars, neon signs, hair dryers, etc.). Adjust the antenna for minimum interference.

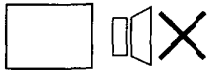
Double images or "ghosts"

➡This may be caused by reflections from nearby mountains or buildings. A highly directional antenna may improve the picture.

Good picture
Noisy sound

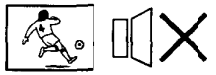
➡Check the TV system (TV SYS) setting.

No picture
No sound



➡Press ⏻.
➡Press ⏻ to turn off the TV for about five seconds and then turn it on again.
➡Check the power cord connection.
➡Check the antenna connection.
➡Check the VCR connections.

Good picture
No sound



➡Press 🔊+.
➡Press 🔇.
➡Press A/B ⊕ (KV-LX34M61 and KV-LX34M90).

No color

➡Adjust the COLOR level in the VIDEO ADJUST menu of the PERSONAL option.
➡Check the color system (COL SYS) setting.

TV cannot receive stereo broadcast signal

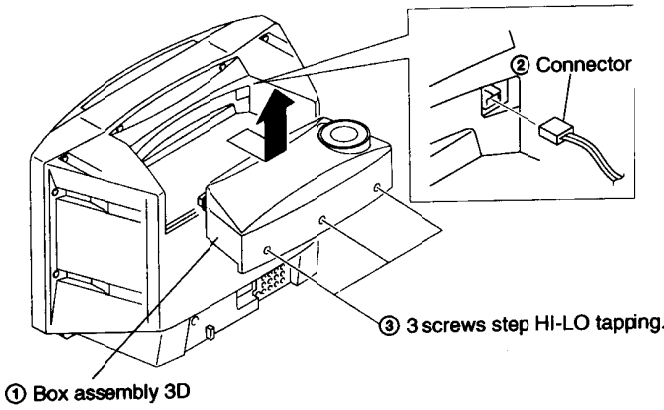
➡Press A/B ⊕ until "AUTO" appears on the screen (KV-LX34M61 and KV-LX34M90).

TV cabinet creaks

➡Even if the picture or the sound is normal, changes in the room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.

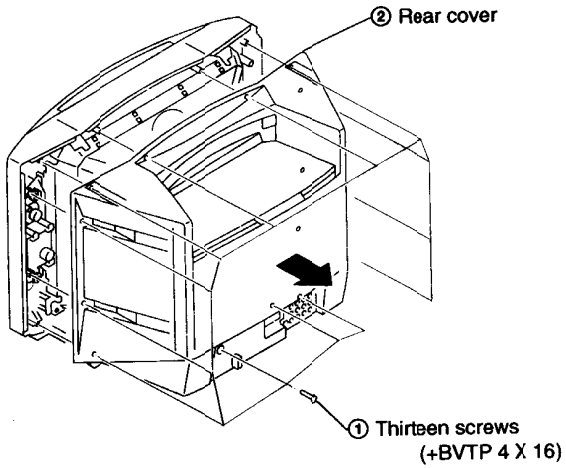
SECTION 2
DISASSEMBLY

2-1. BOX ASSEMBLY 3D REMOVAL

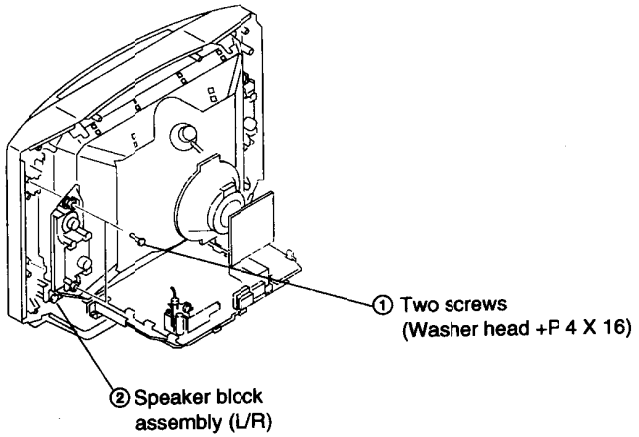


Note: Be sure to remove the BOX ASSEMBLY 3D, before rear cover remove for protect the wire and connector.

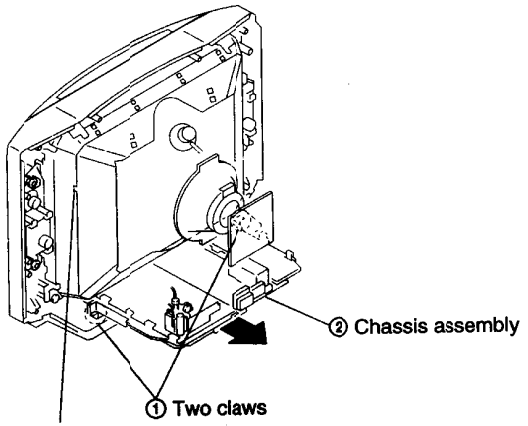
2-2. REAR COVER REMOVAL



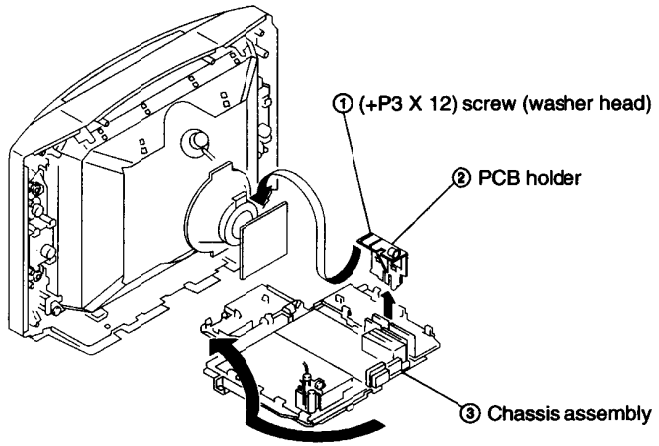
2-3. SPEAKER REMOVAL



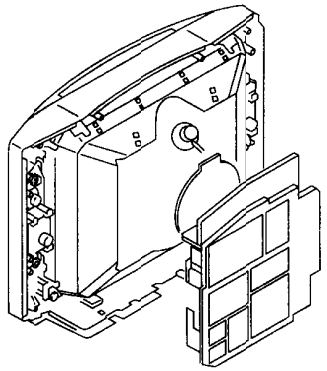
2-4. H6 BOARD AND CHASSIS ASSEMBLY REMOVAL



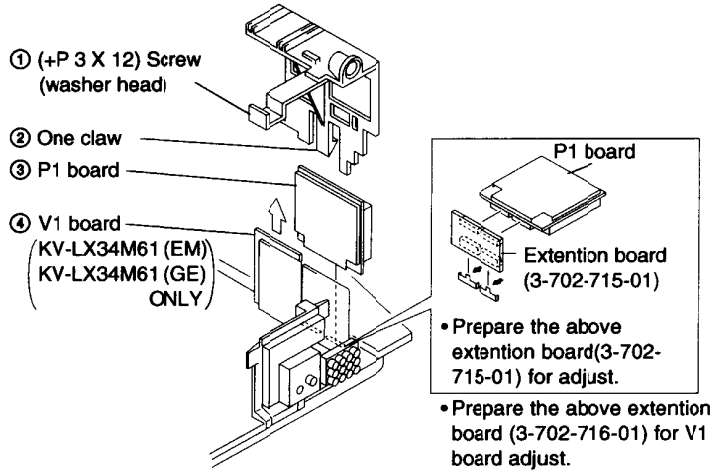
2-5-1. SERVICE POSITION



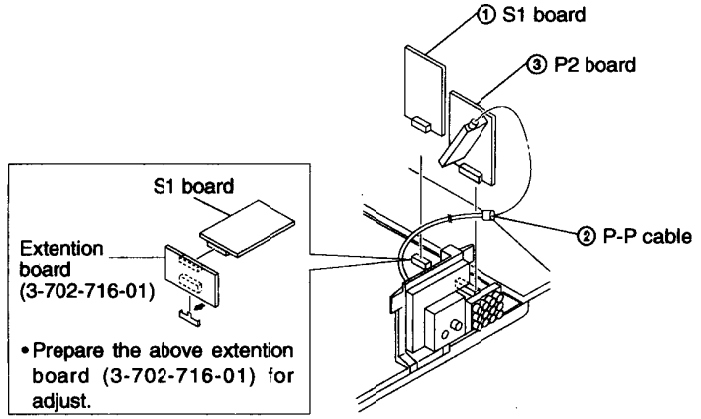
2-5-2. SERVICE POSITION



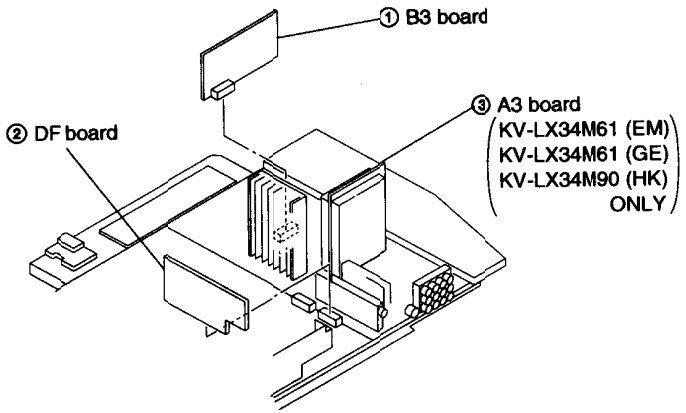
2-6. V1 AND P1 BOARDS REMOVAL


① (+P 3 X 12) Screw (washer head)
② One claw
③ P1 board
④ V1 board (KV-LX34M61 (EM) KV-LX34M61 (GE) ONLY)
P1 board
Extention board (3-702-715-01)
• Prepare the above extention board(3-702-715-01) for adjust.
• Prepare the above extention board (3-702-716-01) for V1 board adjust.

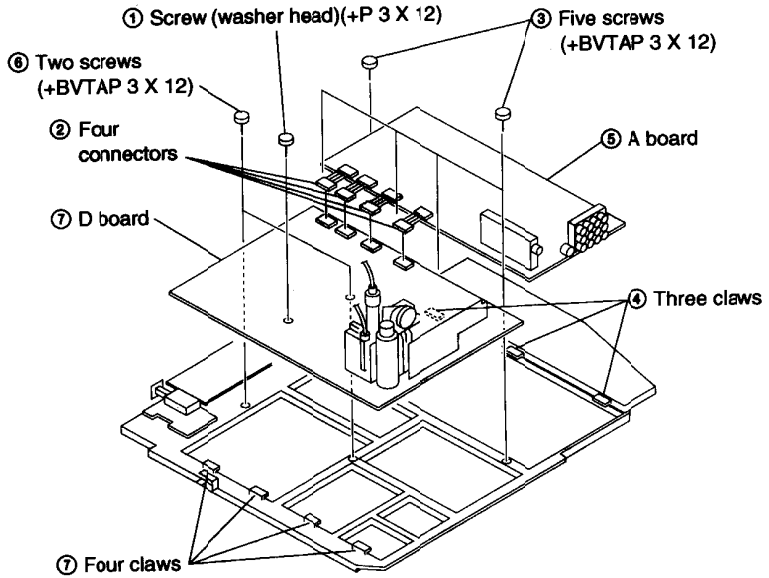
2-7. S1 AND P2 BOARDS REMOVAL



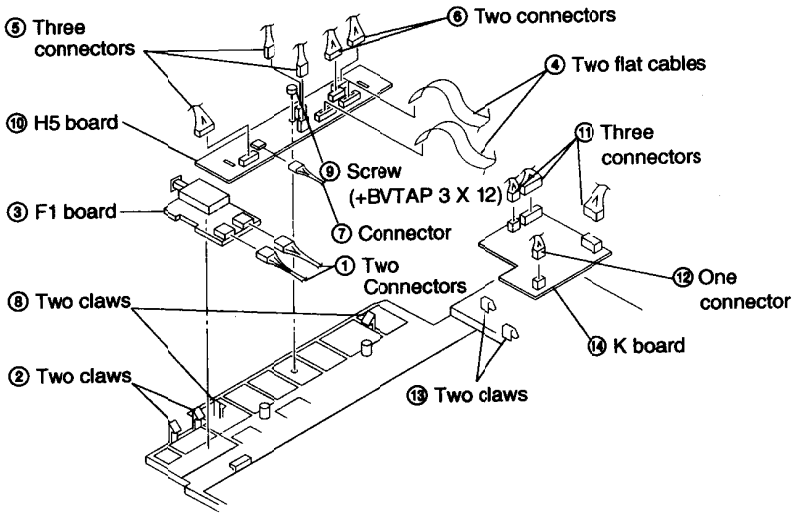
2-8. B3, A3 AND DF BOARDS REMOVAL



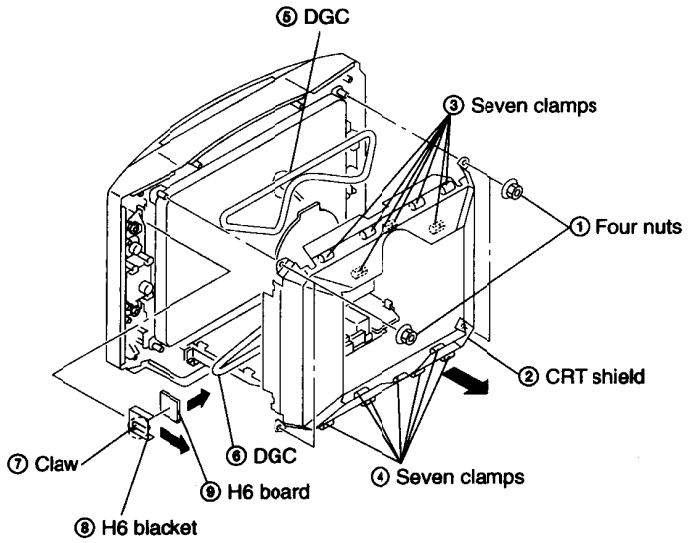
2-9. A AND D BOARDS REMOVAL



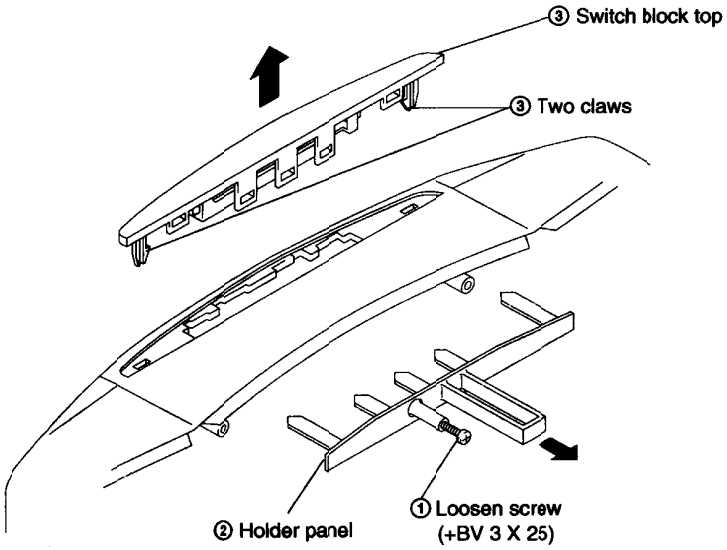
2-10. F1 AND H5 BOARDS REMOVAL



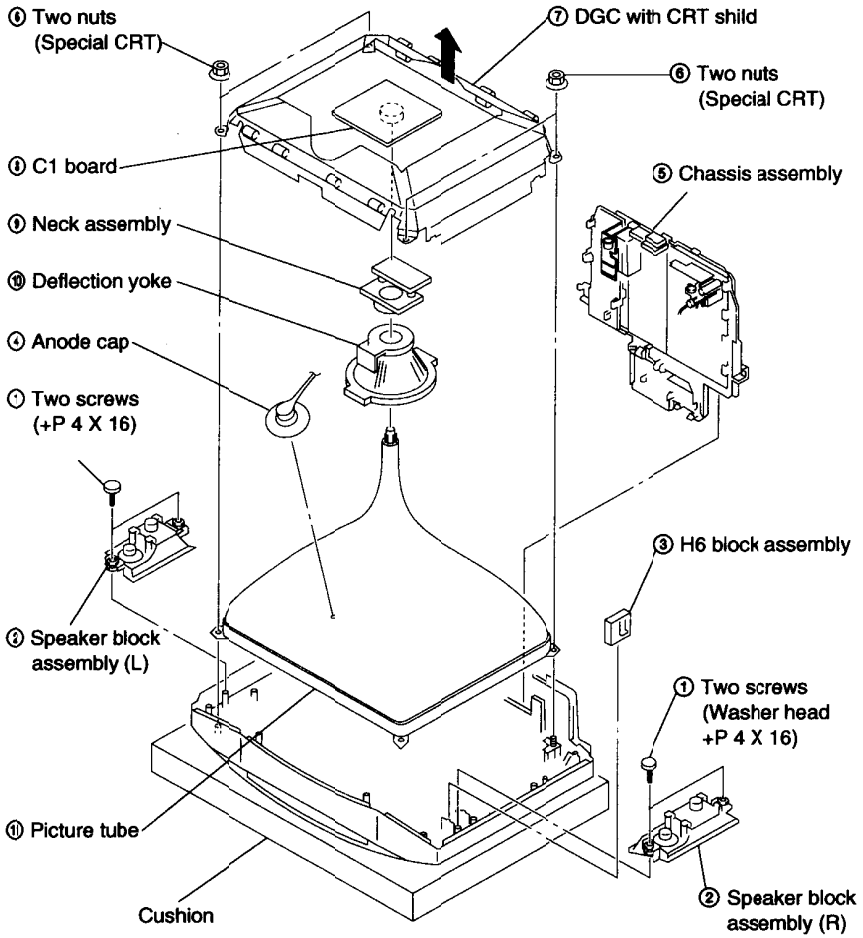
2-11. H6 BOARD AND DGC REMOVAL



2-12. SWITCH BLOCK TOP REMOVAL



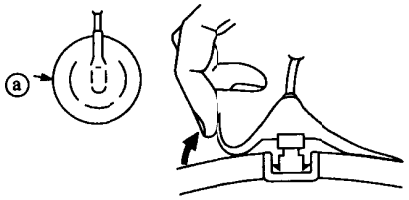
2-13. PICTURE TUBE REMOVAL



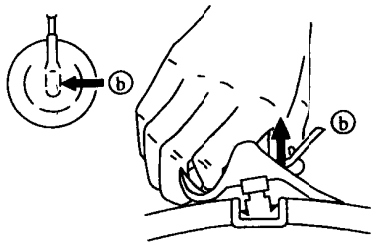
• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

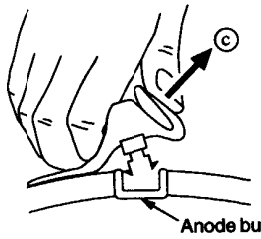
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



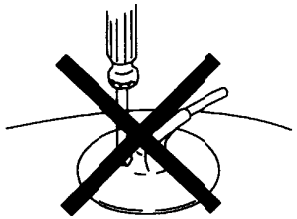
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

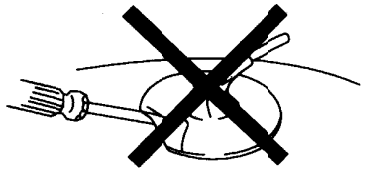
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of ancde-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps! A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly! The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted:
PICTURE control ..... RESET
BRIGHTNESS control ..... CENTER

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input a white signal with the pattern generator.
   Contrast } normal
   Brightness }
2. Position neck ass'y as shown in Fig3-2.
3. Set the pattern generator raster signal to a red raster.
4. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side.
   (See Figures 3-1 through 3-3.)
5. Move the deflection yoke forward and adjust so that the entire screen is red. (See Figure 3-1.)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it.
   (See Figure 3-4.)

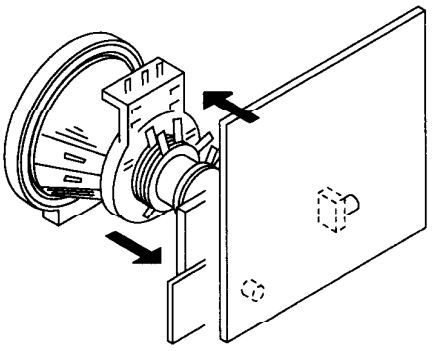


Fig. 3-1

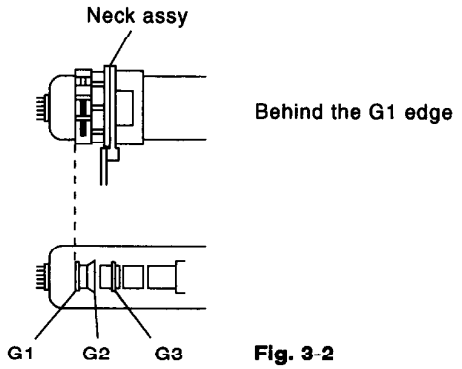


Fig. 3-2

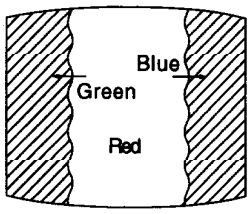


Fig. 3-3

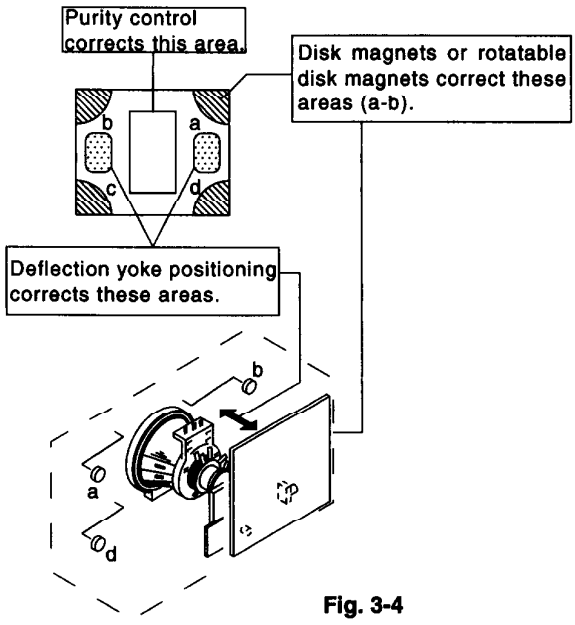


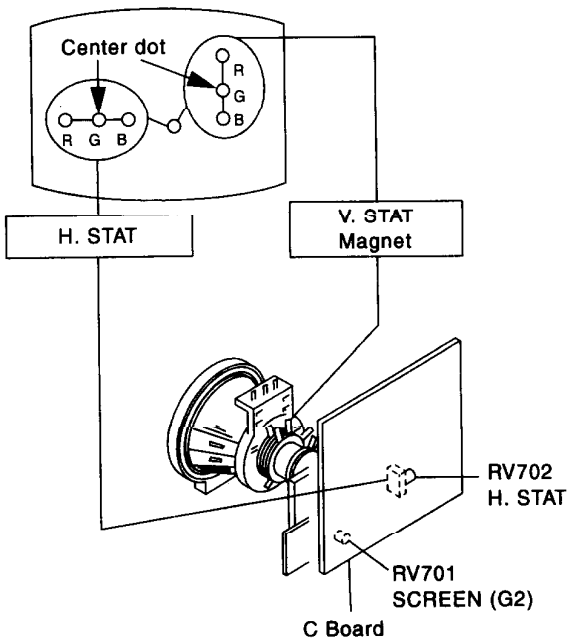
Fig. 3-4

3-2. CONVERGENCE

Preparations :

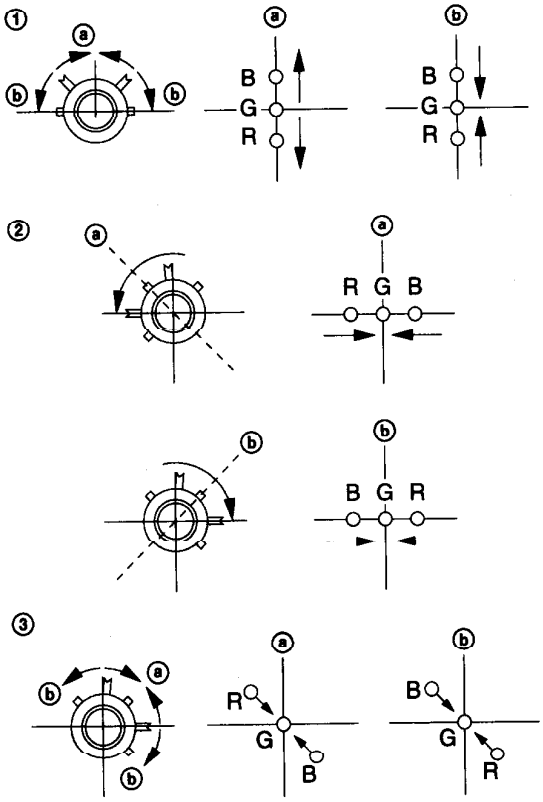
- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and Vertical Static Convergence

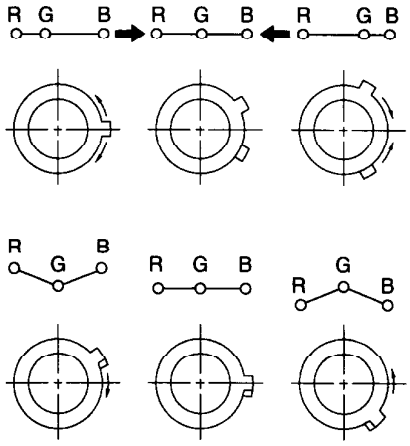


1. (Moving horizontally), adjust the H.STAT control so that the red, green and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other.)

- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.
  If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.

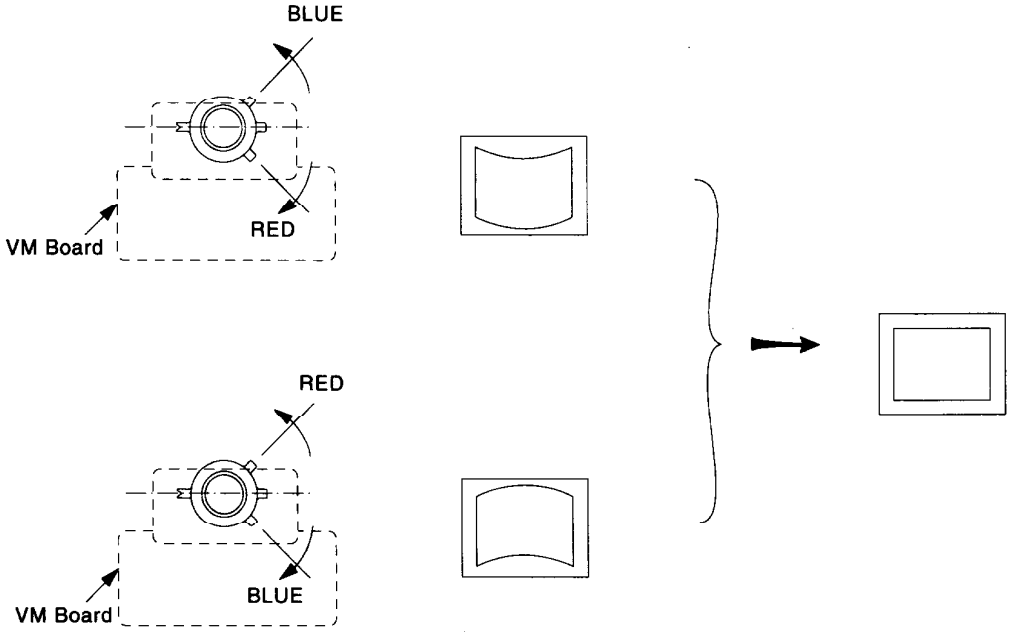


- Operation of BMC (Hexapole) Magnet
  If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.



1 Y separation axis correction magnet adjustment receive the cross-hatch signal and adjust [PICTURE] to [MIN] and [BRIGHTNESS] to [STANDARD] .

2 Adjust the Y separation axis correction magnet on the neck assembly so that the horizontal lines at the top and bottom of the screen are straight.



Note 1) The Red and Blue magnets should be equally far from the horizontal center line.
2) Do not seperate the Red and Blue magnets too far. (Less than 8 mm)

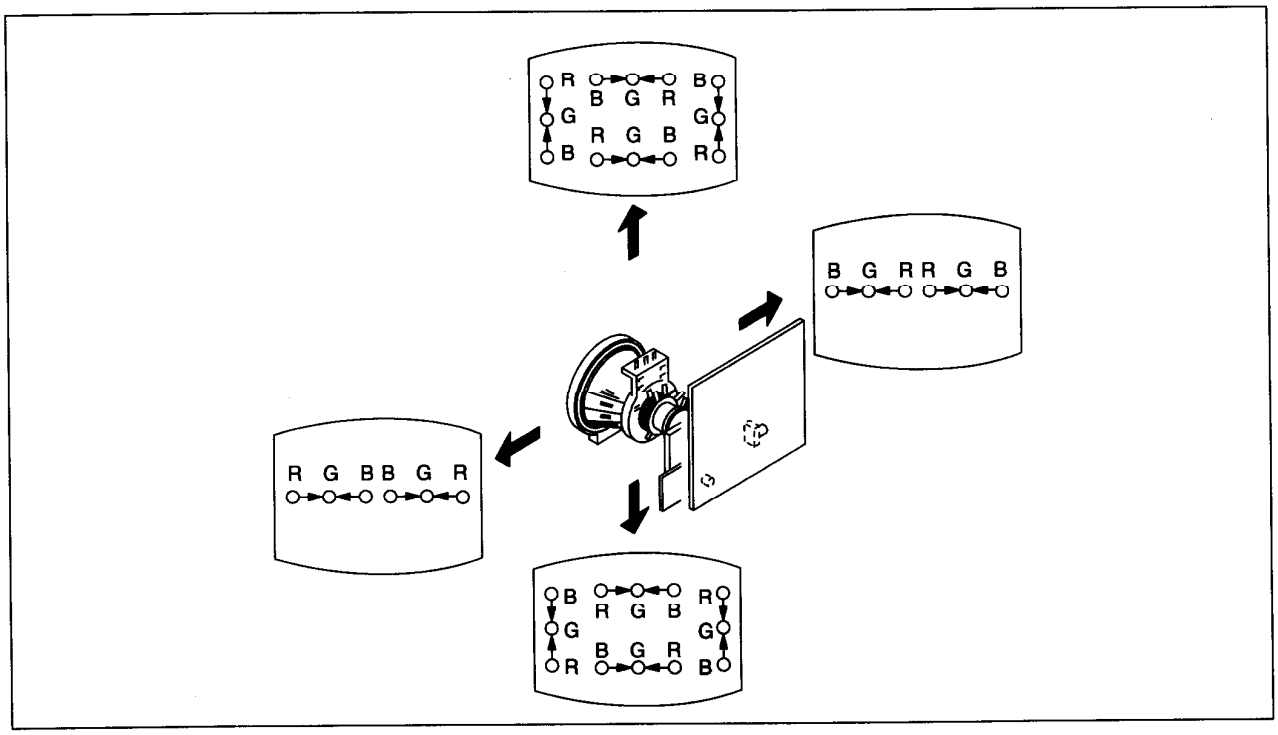
- Use the H.STAT VR to adjust the red, green, and blue dots so that they coincide at the center of screen.
  The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.

(2) Dynamic Convergence Adjustment

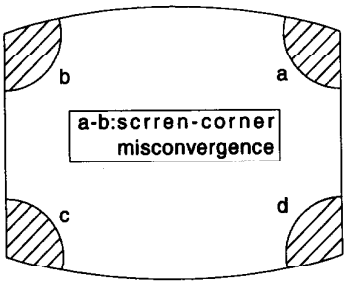
Preparation:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence

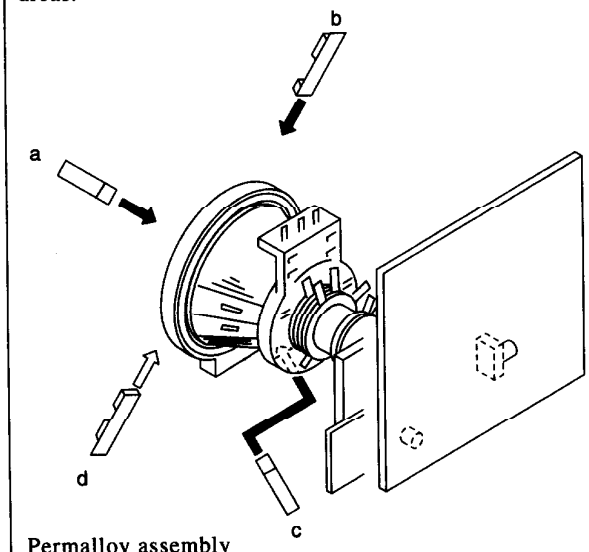
1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Install the deflection yoke spacer.



(3) Screen-corner Convergence



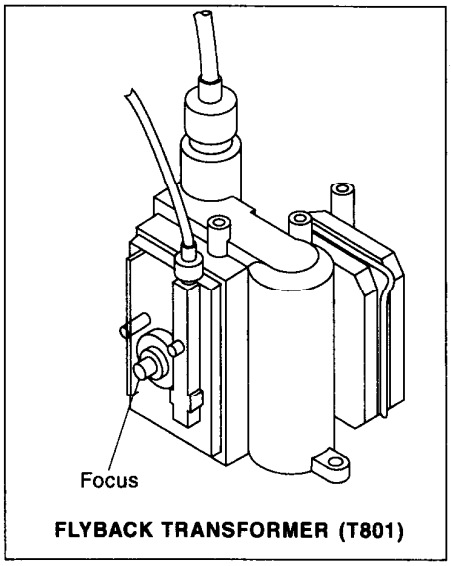
Affix a Permalloy assy corresponding to the misconverged areas.



Permalloy assembly

3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for the best focus.



FLYBACK TRANSFORMER (T801)

a. AN ITEM OF ADJUSTMENT

Item number	Adjustment item	Standard DATA		Note
		50Hz	60HZ	
37	SBR	24	24	SUB-BRIGHTNESS
39	GDR	1D		G. Drive
3A	BDR	20		B. Drive
3B	GCF	07		G. CUT-OFF
3C	BCF	08		B. CUT-OFF

b. METHOD OF CANCELLATION FROM SERVICE MODE

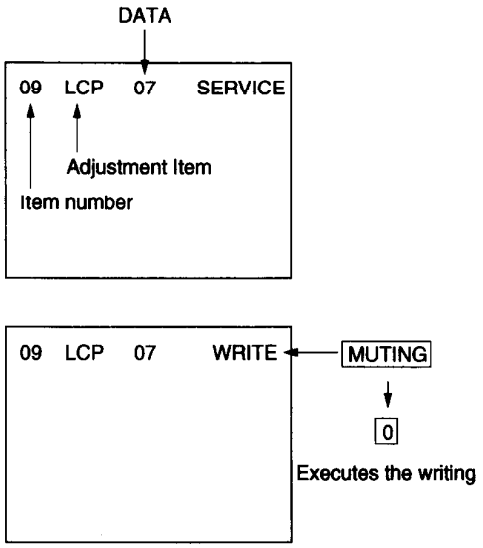
Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

c. METHOD OF WRITE FOR MEMORY

1) Set to Service Mode.
2) Press [1] (UP) and [4] (DOWN), select an item of adjustments.
3) Press [MUTING] button indicate WRITE (RED) on screen.
4) Press [0] button to write into memory.

d. MEMORY WRITE CONFIRMATION METHOD

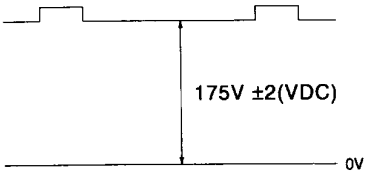
1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again to confirm adjustments were made.



3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT (RV701)

1) Set the PICTURE and BRIGHTNESS to normal.
2) Put to VIDEO input mode without signals.
3) Set to Service Mode.
4) Change BLU data of the item number [8E] from [01] to [00]. (To turn off Blue Back.)
5) Press [MUTING], and [0] to write the data in the memory.
6) Connect R, G, and B of the C board cathode to the oscilloscope.
7) Adjust G2 (RV701) volume to the value below.



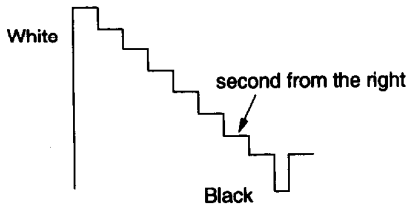
8) Re-set BLU data of the item number [8E] from [00] back to [01].
9) Press [MUTING]. and [0] to write the data in the memory.

2. WHITE BALANCE ADJUSTMENTS

1) Set to service Mode.
2) Input white raster signal.
3) Set the PICTURE to minimum.
4) Select SBR(37) with [1] and [4], and then set the level to minimum with [3] and [6].
5) Select GCF(3B) and BCF(3C) with [1] and [4]. And adjust the level with [3] and [6] for the best white balance.
6) Set the PICTURE to maximum.
7) Select GDR(39) and BDR (3A) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
8) Write into the memory by pressing [MUTING] then [0].

3. SUB BRIGHT ADJUSTMENT

1) Set to service mode.
2) Input a staircase signal of black and white from the pattern generator.
3) BRIGHTNESS .... RESET.
   PICTURE ..... minimum
4) Select SBR(37) with [1] and [4], and adjust SBR level with [3] and [6] so that the stripe second from the right is dimly lit.



SECTION 4
SELF DIAGNOSIS FUNCTION

If no acknowledgement is returned from a device which is turned "ON", the device has a problem.
In this case, one of the LED's responding to the problem device will flicker a defined number of times.

The flickering frequency responding to each failed device is shown below.

Board name	A Board	A Board	A Board	A Board
Ref. No.	IC003	IC1201	IC104	IC206
Device	NONVOLA-TILE MEMORY	AV SWITCH (CXA1855S)	MAIN Y/C (CXA2050S)	SURROUND PROCESSOR (TAD8424)
Flickering Frequency	1	2	3	6

All the devices are checked one after another from the left on the table.
If an error is found, the responding LED will start flickering.
So, if more than 2 devices are failed, the one on the left side will start flickering first.

SECTION 5
CIRCUIT ADJUSTMENTS

5-1. ADJUSTMENTS WITH COMMANDER

Service adjustments are made with the RM-871 that comes with this unit.

Entering service mode

With the unit on standby

↓

[DISPLAY]

↓

[5]

↓

[VOL (+)]

↓

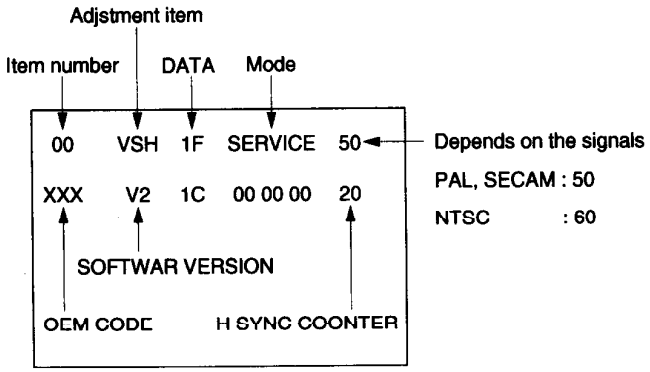
[POWER]

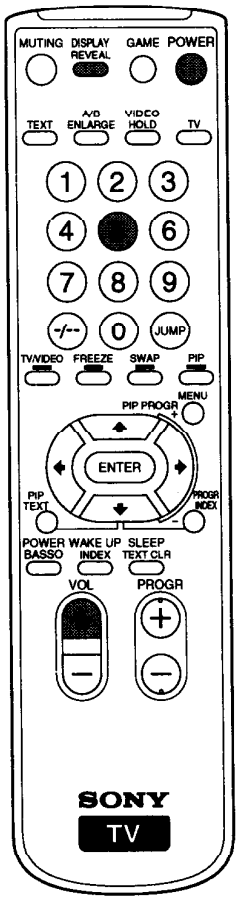
The operation sequence puts the unit into service mode.

[1], [4]	Select the adjustment item.
↓	
[3], [6]	Raise/lower the data value.
↓	
[MUTING]	Writes.
↓	
[0]	Executes the writing.

[7], [0]	All the data becomes the values in memory.
[8], [0]	All user control goes to the standard state.
[5], [0]	Service data initialization (Be sure not to use usually.)
[2], [0]	Write 50Hz adjustment data to 60Hz, or vice versa.

The screen display is :





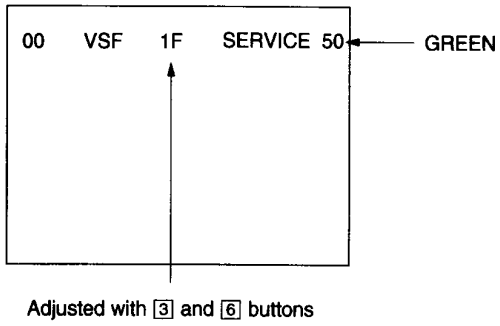
RM-871

5-2. ADJUSTMENT METHOD

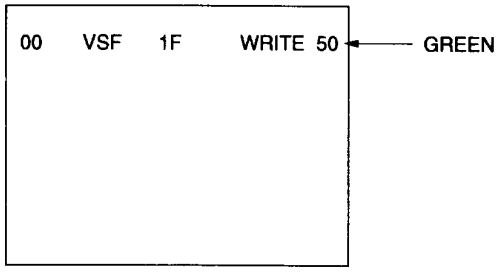
Item Number 00

This explanation uses V-Position as an example.

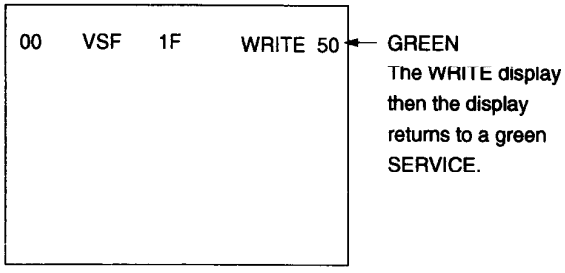
1. Select 00 VSH with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is IF for PAL reception.)
4. Write with the [MUTING] button. (The display changes to WRITE.)
5. Execute the writing with the [0] button. (The WRITE display will be changed back to SERVICE.)



Adjusted with [3] and [6] buttons



Written with [MUTING]



Write executed with [0]

Use the same method for Items Number 00-99. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].

Note : In [WRITE], the data of all items are into memory.

- As for V-FREQ, by searching the bolded screen V range with adjusting data.

Note : For adjustment Items that have differnt standard data between 50Hz or 60Hz and novwel or wid, be sure to use the respective input signal ather adjusting.

Adjustment Item Table

Item number	Adjustment Item	Data range	Standard data	Note	Device
00	VSH	00-3F	1B	V Position	CXA2050S (Y/C/J)
01	VSZ	00-3F	21	V Size	
02	HSH	00-0F	0A	H Position	
03	HSZ	00-3F	12	H Size	
04	SCR	00-0F	06	S Correction	
05	VLN	00-0F	08	V Linearity	
06	PAP	00-3F	0E	Pin Comp	
07	PPH	00-0F	05	Pin Phase	
08	UCP	00-0F	05	Up Corner Pin	
09	LCP	00-0F	05	Low Corner Pin	
0A	BOW	00-0F	05	AFC-Bow	
0B	ANG	00-0F	09	AFC-Angle	
0C	VAP	00-3F	2F	V Aspect	
0D	VSC	00-3F	1F	V Scroll	
0E	ULN	00-0F	00	UP V Linearity	
0F	LLN	00-0F	00	LOW V Linearity	
10	EHH	00-03	02	EHT-H	
11	EHV	00-03	01	EHT-V	
12	HBS	00-01	01	H Blk Wid. ON/OFF	
13	LBK	00-0F	0F	L Blk Width	
14	RBK	00-0F	0F	R Blk Width	
15	JSW	00-01	00	Jump ON/OFF Sw	
16	VBW	00-03	02	V Blk Wid. Con.	
17	AFC	00-03	01	AFC-Mode	
18	FHH	00-01	00	FH-HI	
19	VFQ	00-03	00	V-Freq	
1A	VOF	00-01	00	V OFF	
1B	VMD	00-01	00	CD-Mode 2	
1C	CMD	00-01	00	CD-Mode	
1D	ITL	00-03	00	Interlace	
1E	ZSW	00-01	00	ZOOM SW	
1F	POV	00-03	03	Pre-Over	
20	CT1	00-01	01	C-Trap (NTSC)	
21	CT2	00-01	01	C-Trap (PAL)	
22	CF0	00-0F	07	C-Trap f0 Adj	
23	SF0	00-01	01	Sharpness f0 Adj	
24	TOT	00-01	01	TOT Filter SW	
25	CSW	00-03	00	Color SW	
26	XTL	00-03	00	Xtal	
27	CV1	00-01	01	CV/YC Select (NTSC)	
28	CV2	00-01	01	CV/YC Select (PAL)	
29	VM	00-01	01	VM ON/OFF	
2A	YVM	00-01	00	YS1/VM SW (0:YS1)	
2B	DPC	00-01	01	D-Pic ON/OFF	
2C	DCO	00-01	01	Dynamic Color	
2D	GMM	00-03	01	Gamma	
2E	DTR	00-01	01	DC-Transient	
2F	DL1	00-07	01	Delay Ctrl. (PAL)	
30	DL2	00-07	03	Delay Ctrl. (NTSC)	
31	DL3	00-07	03	Delay Ctrl. (SECAM)	
32	SCN	00-0F	09	Sub-Contrast	
33	SC1	00-0F	0B	Sub-color (OTHER)	
34	SC2	00-0F	09	Sub-Color (NTSC)	
35	SH1	00-0F	05	Sub-Hue (TV)	
36	SH2	00-0F	05	Sub-Hue (VIDEO)	
37	SBR	00-3F	24	Sub-Bright	
38	SSH	00-07	06	Sub-Sharpness	
39	GDR	00-3F	1D	G-Drive	

Note: Bold items are fixed data.

Adjustment Item Table

Item number	Adjustment Item	Data range	Standard data	Note	Device
3A	BDR	00-3F	20	B-Drive	CXA2050S
3B	GCF	00-0F	07	G-Cutoff	(Y/C/J)
3C	BCF	00-0F	08	B-Cutoff	
3D	[illegible]	00-03	01	Ref-Position	
3E	[illegible]	00-01	01	Pic-ON	
3F	[illegible]	00-01	01	R ON	
40	[illegible]	00-01	01	G ON	
41	[illegible]	00-01	01	B ON	
42	[illegible]	00-01	00	AKB ON/OFF SW	
43	[illegible]	00-01	00	Ext Sync Select	
44	[illegible]	00-01	00	Aging Mode ON/OFF	
45	[illegible]	00-01	00	ABL Pic/Pic & Brt SW (0:Pic only)	
46	[illegible]	00-01	01	RGB Limit ON/OFF (0:ON)	
47	[illegible]	00-01	01	Picture Booster	TDA9170
48	[illegible]	00-01	01	Black Offset	(Picture Improve)
49	[illegible]	00-3F	1F	User Var. Gamma	
4A	[illegible]	00-3F	1F	Adaptive Gamma	
4B	[illegible]	00-3F	05	Non-linear Amp	
4C	[illegible]	00-02	00	Window Select	
4D	[illegible]	00-0F	07	Window Line Start	
4E	[illegible]	00-0F	07	Window Line Stop	
4F	[illegible]	00-0F	07	Window Field Start	
50	[illegible]	00-0F	07	Window Field Stop	
51	[illegible]	00-01	01	V Aperture on/off	CXA1315
52	[illegible]	00-03	02	V Aperture White	(V-AP)
53	[illegible]	00-03	02	V Aperture black	
54	[illegible]	00-0F	02	V Aperture core	
55	[illegible]	00-3F	1F	Shapness	CXA1315
56	[illegible]	00-3F	30	VM Limitter	(LTI)
57	[illegible]	00-3F	2A	Coring	
58	[illegible]	00-3F	15	DSC Offset	
59	[illegible]	00-3F	1F	DSC Gain	
5A	[illegible]	00-01	01	Delay time	
5B	[illegible]	00-0F	00	SEL Pin Delay	SDA9189X
5C	[illegible]	00-FF	14	H Position (MSB8bit)	(P in P)
5D	[illegible]	00-FF	27	V Position	
5E	[illegible]	00-1F	00	Pinp Display Mode	
5F	[illegible]	00-0F	00	Write Position	
60	[illegible]	00-1F	0B	HSI Delay	
61	[illegible]	00-01	00	Decimation Filter	
62	[illegible]	00-1F	0B	VSI Delay	
63	[illegible]	00-1F	0D	VSP Delay	
64	[illegible]	00-0F	06	Contrast	
65	[illegible]	00-0F	09	Frame V	
66	[illegible]	00-0F	00	Frame V	
67	[illegible]	00-0F	00	Frame U	
68	[illegible]	00-01	01	Inner Frame	
69	[illegible]	00-03	02	Frame Width V	
6A	[illegible]	00-07	07	Frame width H	
6B	[illegible]	00-03	02	PLL Loop Filter	
6C	[illegible]	00-0F	00	Pedestal V	
6D	[illegible]	00-0F	00	Pedestal U	
6E	[illegible]	00-01	00	DAC Stream Control	
6F	[illegible]	00-01	00	DAC Control	

Note: ▓ Bold Items are fixed data.

Adjustment Item Table

Item number	Adjustment Item	Data range	Standard data	Note	Device
70	[illegible]	00-01	00	Wipe on/off	SDA9189X
71	[illegible]	00-03	00	Wipe Speed	(P in P)
72	[illegible]	00-FF	08	NICAMFAW Thresh	MSP3410
73	[illegible]	00-FF	08	NICAM Error Bit (MONO)	(Stereo Decorder)
74	[illegible]	00-FF	50	NICAM Error Bit (NICAM)	
75	[illegible]	00-FF	0A	W.G.DATA CHANGE	
76	[illegible]	00-FF	15	W.G.STEREO Threshold	
77	[illegible]	00-FF	50	W.G.Timer	
78	[illegible]	00-01	EA	W.G.bilingual Threshold	
79	[illegible]	00-01	01	AGC AUTO/CONST	
7A	[illegible]	00-3F	28	AGC GAIN CONST	
7B	[illegible]	00-7F	24	FM (BG,I,DK) Prescale	
7C	[illegible]	00-7F	40	FM (M) Prescale	
7D	[illegible]	00-7F	3C	W.G.Prescale	
7E	[illegible]	00-7F	7F	NICAM Prescal	
7F	[illegible]	00-01	00	Carrier Mute	
80	[illegible]	00-03	00	Carrier Mute Level	
81	[illegible]	00-01	01	Audio Clock Out	
82	[illegible]	00-0F	01	W.G.Agreement count	
83	[illegible]	00-FF	30	Stereo Search Delay	
84	[illegible]	00-FF	10	W.G.Search Delay	
85	[illegible]	00-OF	0E	Text Picture cont.	SAA5281
86	[illegible]	00-OF	0F	Text Mix Mode Pic.	(Text decoder)
87	[illegible]	00-3F	16	BBE control High	CXA1315
88	[illegible]	00-3F	16	BBE control Middle	(BBE)
89	[illegible]	00-3F	16	BBE Control Low	
8A	[illegible]	00-03	00	Auto Wide Ident speed	CXP5068
8B	[illegible]	00-FF	00	Blk off Picture	CXP85340
8C	[illegible]	00-3F	0D	OSD Position H	(MICRO
8D	[illegible]	00-FF	10	Power On Delay	CONTROLLER)
8E	[illegible]	00-01	01	Blue Back on/off	
8F	[illegible]	00-OF	0F	N/S Center Vol.	
90	[illegible]	00-07	0F	User Step	
91	[illegible]	00-01	01	D/K Stereo Serch	
92	[illegible]	00-01	01	No. Sync. Mute	
93	[illegible]	00-01	00	Disable Degauss	
94	[illegible]	00-01	00	Disable Widezoom	
95	[illegible]	00-01	00	BASS Center Shift	
96	[illegible]	00-01	00	BASS Volume Shift	
97	[illegible]	00-03	00	Woofer off Bass Shift	
98	[illegible]	00-FF	C1	Option0	
99	[illegible]	00-FF	1E	Option1	

Note: Bold items are fixed data.

ITEM INFORMATION

- 50 ··· 50Hz data, 60 ··· 60Hz data
- Standard data listed on the Adjustment Item Table are reference values, therefore if is different for every model.

OP0

MSPRST	–	–	–	–	–	–	Fastext
1	1	0	0	0	0	0	1

OP1

WIDE	WOOFER	Tilt	VM	Comb type	Comb filter	SECAM	B/G only
0	0	0	1	1	1	1	0

5-3. PICTURE QUALITY ADJUSTMENTS

Item Number 33-36

33 SCO Sub-Color

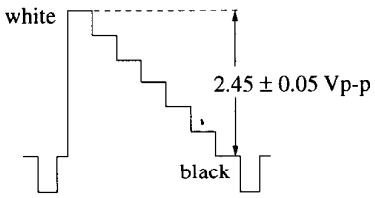
34 SHU Sub-Hue

35 SBR Sub-Bright

5-4. A BOARD ADJUSTMENT

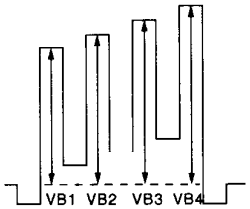
SUB CONTRAST ADJUSTMENT (SCN)

1. Receive a PAL color-bar.
2. Set service item 40 GON and 41 BON to data "00". Set the PICTURE 100%, BRIGHT 50% and COLOR MIN.
3. Connect an oscilloscope to the pin ⑥ (R OUT) of CN117, A board.
4. Set to Service Mode and select 32 (SCN) using [1] and [4] of the commander to adjust to 2.10 ± 0.05V.
5. Press [MUTING] → [0] of the commander to write the data.
6. Receive a NTSC color-bar and adjust 32 (SCN) as step 2~5.
7. Set servce item 40 GON and 41 Bon to data "01".



SUB COLOR ADJUSTMENT (SCO)

1. select Video1
2. Input a NTSC color-bar, video into video1.
   Set to the following condition:
   PIC 100%, BRT 50%, COL 50%
3. Connect an oscilloscope to the pin ⑤ (B OUT) of CN117, A board.
4. Set to Service Mode and select 33 (SC1) with [1] and [4] of the commander to adjust to VB2=VB3=VB4 with [3] and [6].
5. Press [MUTING] → [0] of the commander to write the data.
6. Adjust 33 (SC1) as step 1~4 when receiving NTSC color-bar.

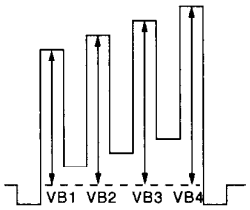


VB2 = VB3 = VB4

7. [Receive] the NTSC color-bar and adjust as step 6.

SUB HUE ADJUSTMENT (SHU)

1. select Video1
2. Input a NTSC color-bar, video into video1.
3. Connect an oscilloscope to the pin ④ (B OUT) of CN117, A board.
4. Select 35 (SH1) with [1] and [4] of the commandar by setting to Service Mode and adjust to VB1=VB2=VB3=VB4 with [3] and [6].



VB2 = VB3 = VB4

5. Press [MUTING] → [0] of the commander to write the data.
6. Set to WIDE Mode by [MENU] button to write the same value as in step 3.

PIP POSITION (POH. POV)

1. Receive a PAL color-bar.
2. Set the PIP picture by pressing [PIP] button of the commander.
3. Set to Service Mode.
4. Select 5C (POH) with the [1] and [4] of the commander to set the data "14" with [3] and [6].
5. Select 5D (POV) to set the data "27"
6. Press [MUTING] → [0] of the commander to write the data.
7. Check by changing using menu .

5-5. A BOARD ADJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT

When replacing IC003(MEMORY) be sure to change IC001(μ-COM) to the following new IC at the same time.

IC001 (μ-COM)

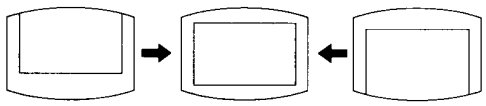
- **GE, EM, E, HK model**
  CXP85340A-225S (8-752-889-04)
- **ME (Arabic) model**
  CXP85340A-226S (8-752-889-05)

1. Enter to Service Mode.
2. Press commander buttons [5] and [0] (Data Initialize), and [2] and [0] (Data Copy) to initialize the data.
3. Call each item number, and check if the respective screen shows the normal picture.
   In cases where items are not well adjusted, rectify the items with fine adjustment.
   Write the data per each item number ([MUTING] +[0]).
4. Select item numbers "98" (OP0) and "99" (OP1) and respectively set the bit per model with command buttons [3] and [6].
5. Press commander buttons [8] and [0] (Test Normal) to return to the data that was set on the shipment from the factory.
   (This will also cancel Service Mode.)

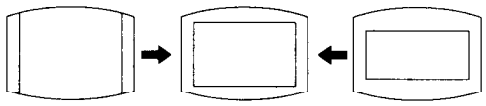
5-6. PICTURE DISTORTION ADJUSTMENT

Item Number 00 – 0B

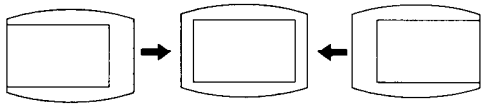
00 VSH(V POSITION)



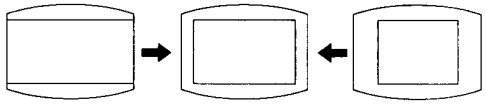
01 VSZ(V SIZE)



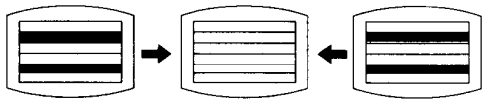
02 HSH(H POSITION)



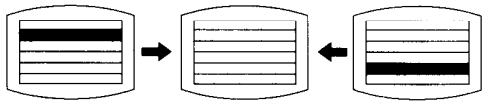
03 HSZ (H SIZE)



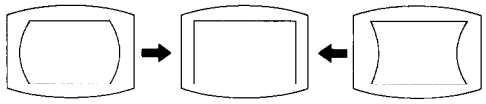
04 SCR(VERTICAL Scorrection)



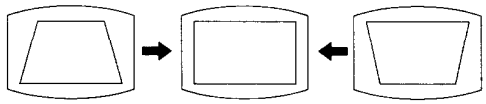
05 VLN(V LINEARITY)



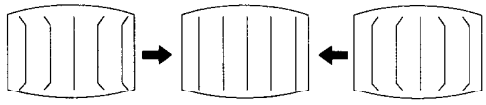
06 PAP (PIN AMP)



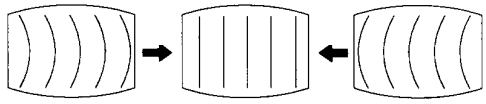
07 PPH(PIN PHASE)



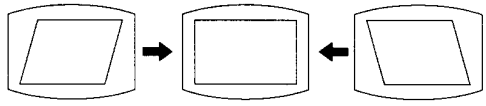
08 UCP(Upper Corner Pin)
09 LCP(Lower Corner Pin)



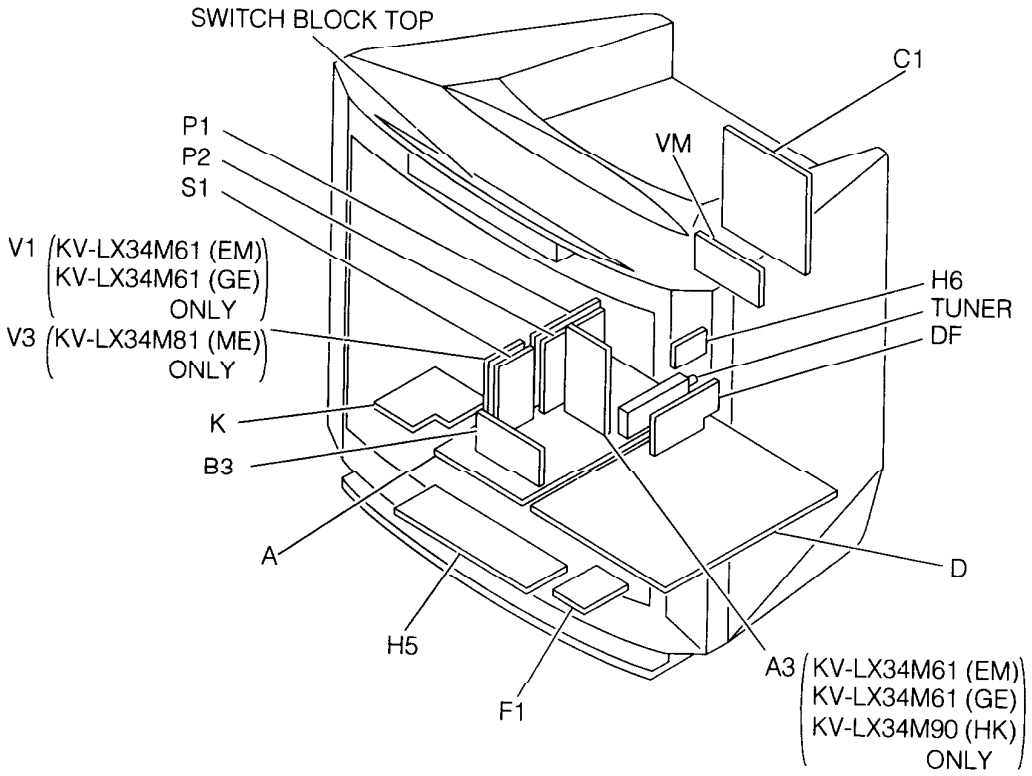
0A VBOW(AFC.BOW)



0B VAG(AFC.ANGLE)



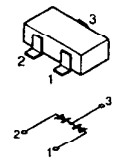
6-3. CIRCUIT BOARDS LOCATION



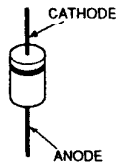
6-5. SEMICONDUCTORS

DIODE

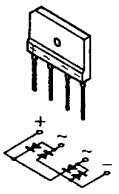
DAN202K



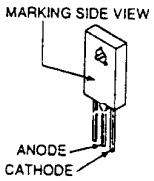
D1NL20-TA
GP08D
HSS83
RD13ES-T1B
RD4.7ES-T1
RD5.1ES
RGP02
RGP10GP
RGP15GP



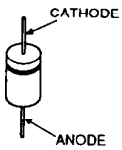
D4SB60L



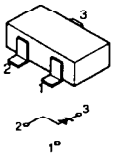
D5LC20U



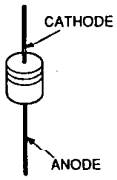
ERD29-08J



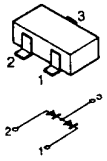
RD5.6M
RD6.8MT1B3



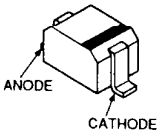
1SS119-25
ERA38-06
MTZ39
MTZJ3.9B
MTZJ5.6B
MTZJ6.8B
HZS9B2
RD11ES-T1B2
RD33ES-T1B
RD5.6ES
RD7.5ES
RD8.2ES-T1B2



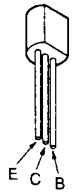
1SS123



1SS355T
MA111

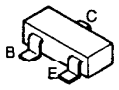


2SA1091R

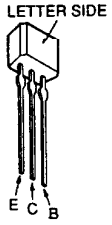


TRANSISTOR

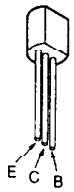
2SA1162-YG
2SB709A
2SC2712
2SC4793
DTA144EK
DTC114EK
DTC144EK
DTC144EKA
UN2212



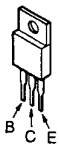
2SA1175TP
2SC2785TP
DTD114ES



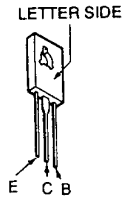
2SA1315-Y



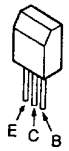
2SA1837



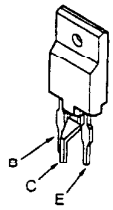
2SC2688
2SC3840K



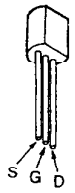
2SC2958
2SC3209



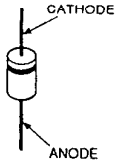
2SD1640Q



2SK246YGR

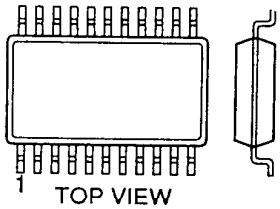


31DF2
ERC06-15S
RU4AM-T3
S3L20UF4



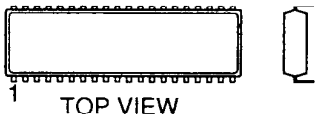
IC

BA7606F
CXA1315M
NJM4558M
SDA9187
SDA9189
TDA9170



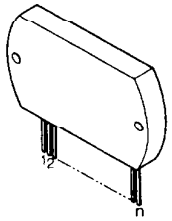
Small Outline L-leaded Package
Pin 8 ~ 98

CXA1855S
LM339N
NJM2903D
NJM2904D
TDA4665T
TDA9160A
XR1071CP

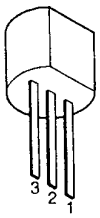


Dual In-line Package
Pin 6 ~ 98

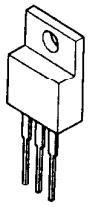
LA7016



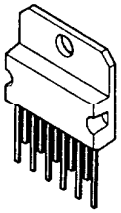
NJM78L05A
NJM78L09A



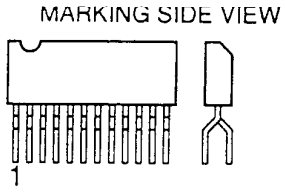
L7805CV
L7808CV
L7809CV



TDA2009

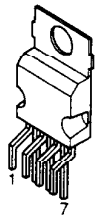


TDA6101Q/N3



Zig-zag In-line Package
Pin 6 ~ 99

TDA8172



SECTION 7
EXPLODED VIEWS

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

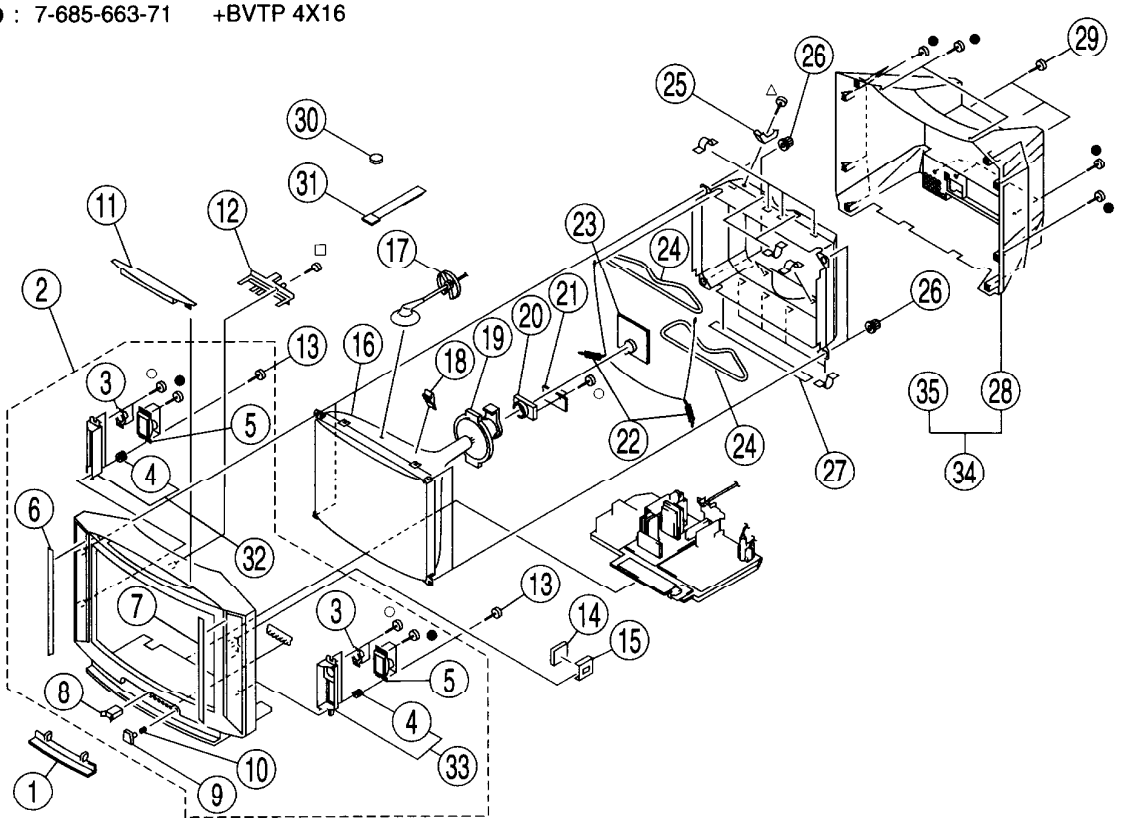
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

7-1. CABINET

○ : 7-685-648-71 +BVTP 3X12
□ : 7-685-152-19 +BV 3X25
△ : 7-685-661-14 +BVTP 4X12
● : 7-685-663-71 +BVTP 4X16

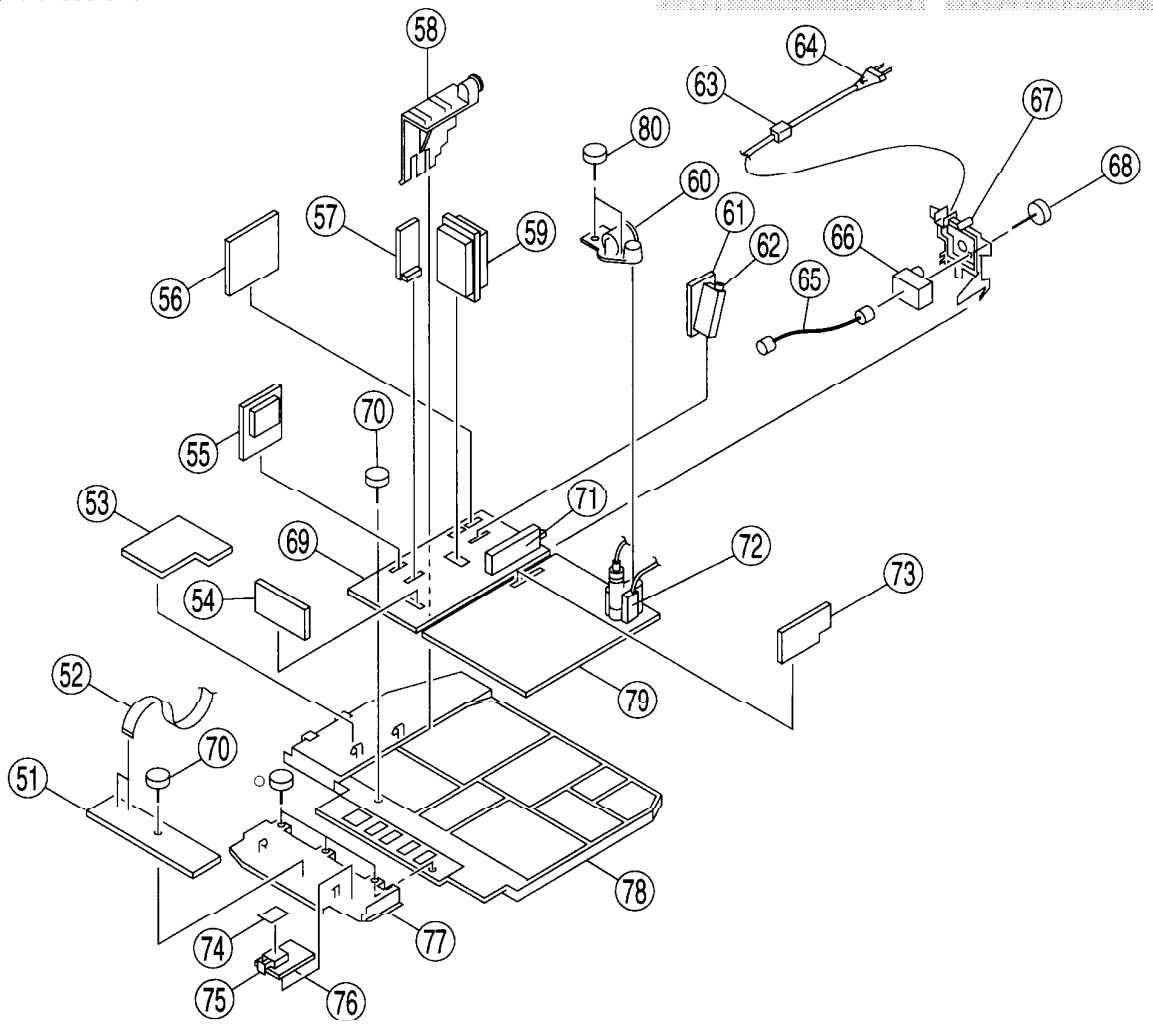


The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

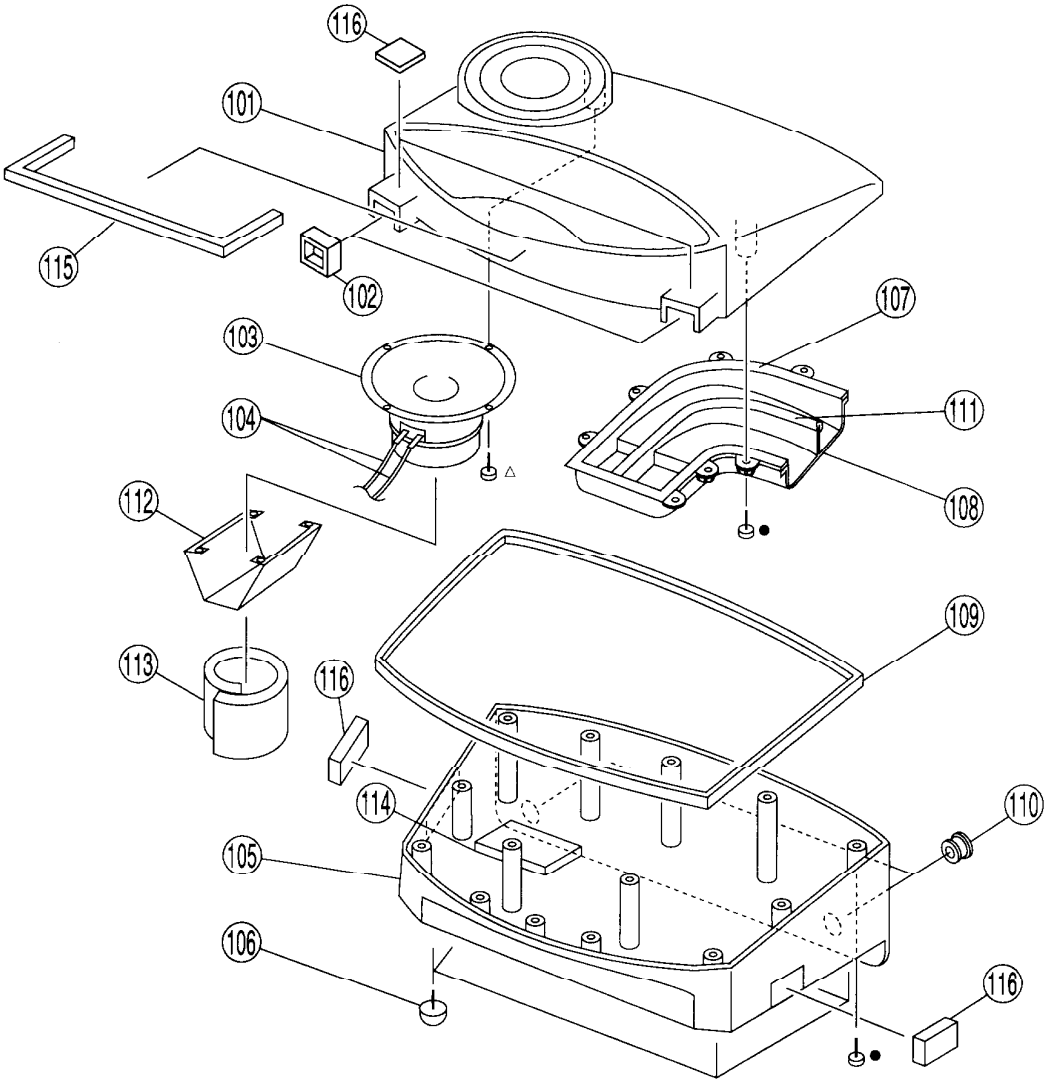
7-2. CHASSIS

○ : 7-685-648-71 +BVTP 3X12



7-3. BOX ASSEMBLY, 3D

● : 7-685-663-71 +BVTP 4X16
△ : 7-685-661-14 +BVTP 4X12



SONY

SERVICE MANUAL

BG-1L CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-LX34M50	RM-871	EM	SCC-K58D-A
KV-LX34M61	RM-871	EM	SCC-K58C-A
KV-LX34M61	RM-871	GE	SCC-K52G-A
KV-LX34M80	RM-871	E	SCC-K60F-A
KV-LX34M80	RM-871	ME	SCC-K57K-A
KV-LX34M81	RM-871	ME	SCC-K57J-A
KV-LX34M90	RM-871	HK	SCC-K56E-A

SUPPLEMENT-1

SUBJECT : PART CHANGE

File this supplement with the Service Manual.

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

- The component identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

- CAPACITORS
  PF : μμ F
- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

(See page 92)

REF. NO.	PART NO.	DESCRIPTION			REMARK
C2617	1-125-905-11	ELECT (BLOCK)	560MF	20%	450V

MICROFILM

9-965-659-81

Sony Corporation
Display Company
TV Display Business Asia

English
98FG70180-1
Printed in Malaysia
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SONY

SERVICE MANUAL

BG-1L CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-LX34M50	RM-871	EM	SCC-K58D-A
KV-LX34M61	RM-871	EM	SCC-K58C-A
KV-LX34M61	RM-871	GE	SCC-K52G-A
KV-LX34M80	RM-871	E	SCC-K60F-A
KV-LX34M80	RM-871	ME	SCC-K57K-A
KV-LX34M81	RM-871	ME	SCC-K57J-A
KV-LX34M90	RM-871	HK	SCC-K56E-A

CORRECTION-1

SUBJECT : PART CHANGE

File this correction with the Service Manual.

☛ : Corrected portion

SECTION 7 EXPLODED VIEW

7–1. CABINET (see page 76)

INCORRECT					CORRECT				
REF. NO.		PART NO.	DESCRIPTION	REMARK	REF. NO.		PART NO.	DESCRIPTION	REMARK
16	⚠	8-733-754-05	PICTURE TUBE (A80JYV51X) (LX34M90)		16	⚠	8-733-746-05	PICTURE TUBE (A80JYV51X) (LX34M90)	

SECTION 8 ELECTRICAL PARTS LIST

MISCELLANEOUS (see page 99)

INCORRECT					CORRECT				
REF. NO.		PART NO.	DESCRIPTION	REMARK	REF. NO.		PART NO.	DESCRIPTION	REMARK
	⚠	8-733-754-05	PICTURE TUBE (A80JYV51X) (LX34M90)			⚠	8-733-746-05	PICTURE TUBE (A80JYV51X) (LX34M90)	

MICROFILM

9-965-659-91

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Display Company
TV Display Business Asia

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